

SMOKE SIGNALS

For Radio Amateurs • By Radio Amateurs

Published Monthly Since 1969 • Our 30th Year

Single Copy: \$1.25

Return Address:
Kenneth A. Ebner
822 Wauona Trail
Portage, WI 53901

ADDRESS SERVICE
REQUESTED

Bulk Rate
U.S. Postage
PAID
Permit #265
Portage WI 53901

Vol. 29 No. 11 • 357th Consecutive Monthly Issue • Baraboo, Wisconsin • November 1999

High-Altitude Balloons, Repeaters, ATV, and the Fun of the Hunt

By Tom Weeden, WJ9H

Editor's note: Although this Balloon-Carried Amateur Radio flight took place a while back, it was fun - and it's a great story. We asked Tom Weeden, WJ9H, to scribe something of his adventures as part of a chase team. Those teams recover the packages after they parachute to a (usually, but not always) safe landing. We begin with the usual reporter's questions, which we asked Tom to answer. Tough assignment, and he came through!

Who: Near Space Sciences is Joe Mayenschein, WB9SBD, and others, near as I can tell. I've never asked Joe "who" is NSS.

What: I guess the "what" is the goal of launching a high-altitude balloon with as much technology onboard as can be lifted upward. Crossband repeater, 2M in, 439.25 out. The 439.25 TX was a Wyman (?) ATV transmitter which allowed frequency modulation of the main video carrier, which is modulated AM. (Huh?) That meant if you had an ATV downconverter, you could translate the ATV signal down to channel 4 and watch on a normal TV set. It also meant that if you tuned into the same signal with a UHF FM rig, you'd hear normal FM audio. Pretty neat. Also GPS/TNC on board, and I believe a still camera.

Where: Launched from near LaValle, WI. I don't know the exact location, nobody would/could tell us prior to launch, presumably because they were busy filling the balloons.

When: About 7 a.m., Saturday, August

28, 1999.

How: With ham ingenuity. And duct tape.

Why: Because we're hams. Kind of a high-er tech fox hunt.

Our chase team consisted of driver Tom Fleming, N9SZF; Tim Czerwonka, WO9U; Pat Weeden, KB9SPA; and myself. Our plan was to wait for acquisition of signal from a hill on the far northeast side of Madison, determine the balloon's course and then head downwind.

After launch was announced, and we began hearing packets, I discovered that we weren't decoding any. We abandoned our high ground to rush back to N9SZF's house where I had parked my van to get a replacement cable. Then we began displaying raw position packets although APRS was not decoding very many of them to plot on the laptop. We ended up using an aircraft sectional map to manually plot the balloon's GPS location using a pencil.

The borrowed 486 laptop had batteries that were dependable... you could depend on them not working. So part of our arsenal was a borrowed Best Power 500 VA UPS that powered the computer while driving. When its battery got low, it sent out the letter "B" in Morse Code. We were hearing lots of Bs and spent a lot of time looking for places to plug into AC during the chase.

One such place was a Kwik Trip in Stoughton, where the management graciously allowed us to use an outlet on the outside of the store to recharge the UPS.

"The borrowed 486 laptop had batteries that were dependable... you could depend on them not working."

Tom, WJ9H



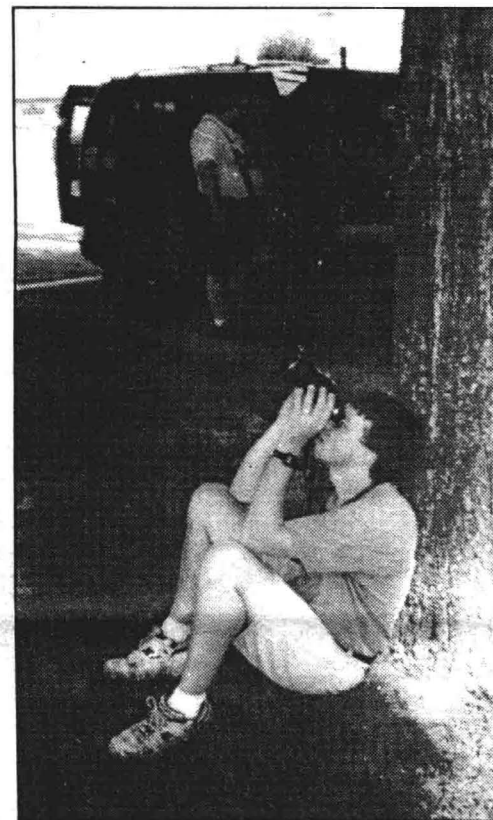
Tim Czerwonka, WO9U, with the UHF ATV antenna in Edgerton.

Photo courtesy Tom Weeden, WJ9H

The site also happened to be almost directly under the balloon after it stopped its forward progress. We pulled out the binoculars and beam antenna for ATV reception, and got looks from the locals. My favorite was from a postal worker who drove past us asking if we were tracking a bear.

After we were charged up again, it was off to the countryside and eventually to Edgerton, where the UPS was pestering us with its CW for another recharge. We found the old train station/city park area, where we located another AC outlet and a nice spot to set up a tripod for the antenna. KB9SPA was watching through binoculars at the two balloons rotating around each other and then announced that he could only see one at about the same time the video from the payload started showing some rough motion. So we packed up and headed toward Janesville, where we thought it was going to come down.

KB9OUC and some others in Janesville heard our chase and decided to go mobile to help find the package. We lost reception near the Rock County Airport between



Pat Weeden, KB9SPA, is viewing the balloon through binoculars moments before one of the balloons burst. In the background, Tom Fleming, N9SZF, is looking at ATV coming from the ATV transmitter in the payload.

Photo courtesy Tom Weeden, WJ9H

Janesville and Beloit, but headed toward the last good GPS coordinates. We occasionally could hear a weak signal as we drove around, but never quite got a good fix on it. I had to be the wet blanket to call off the chase before the package was recovered in order to be at a wedding in Madison on time. We later heard that the package was located and eventually recovered in good shape.

Ham convicted of fraud in bogus equipment offerings case

A Florida ham has been ordered to spend most of the next five years in prison after pleading no contest to fraud charges involving offers to sell amateur and vintage gear. Michael T. Kirby, W5JBV (ex-K4-VFY), of Panama City, Florida, had been arrested August 20 for scheming to defraud using the US mails. Kirby has a history of arrests and convictions for allegedly accepting payments for equipment he never delivered.

Panama City Police Detective Robert Luther said that Kirby pled no contest September 30 in Bay County Florida 14th Judicial Court, "which means he puts himself on the mercy of the court," Luther explained.

Kirby will get 41 days credit for time served in the Bay County Jail following his arrest.

Luther said Kirby's fraudulent dealings were extensive. He said that while Kirby actually received somewhat less than \$20,000 in proceeds from his fraudulent dealings, "the attempted fraud is well greater than that."

The court required Kirby to make restitution "to as many victims as I can identify," Luther said. Some victims already have received refunds. Luther said those defrauded by Kirby who have not already received a refund or been in contact with

Please turn to page 4

FLIPPING THE PAGES

What's Happening: Edited by Ken Ebner, K9EN	2
65 Years of Hamming it up	4
Card ad renewals due	4
American Red Cross seeks communicators - Bruce Micales, WA2DEU	5
Solar Cycle Progression - Woody Minar, K9EF	5
The Computer Corner, No. 72: Back up that Registry! - Stan Kaplan, WB9RQR	6
Racine Megacycle Club	7
Sheboygan County Amateur Radio Club	7
ManCoRad Radio Club	7
Quarter Century Wireless Association/Southeastern Wisconsin Chapter 162	7
Red Cedar Repeater Association, Inc.	8
Wisconsin Nets Association Ltd.	8
Support the Amateur Radio Protection Act - Jim Lackore, AD9X, ARRL Section Government Liaison	9
ARRL Humanitarian Award nominations due	9
The Wisconsin Packeteer	10
Yellow Thunder Amateur Radio Club	11



WHAT'S HAPPENING

✕ Swapfests and Other Social Events ✕ Club Meetings
✕ Amateur Radio Exam Schedules

Edited by Kenneth A. Ebnetter, K9EN, 822 Wauona Trail Portage, WI 53901 • kebnetter@palacenet.net

Swapfests and Other Social Events

SATURDAY, NOVEMBER 6, 1999. "6.91 Friendly Fest" Amateur Radio and Computer Expo '99, Waukesha County Expo Center Forum, N1 W24848 Northview Rd., Waukesha, WI. Talk in on 146.91 (The Friendly Repeater) Contact: The Milwaukee Repeater Club, Box 2123, Milwaukee, WI 53201-2123. (887) 672-3378. Web page <http://www.execcpe.com/~mrc> or e-mail mrc@execcpe.com

SUNDAY, NOVEMBER 7, 1999 Fox Cities ARC Hamfest, Kaukauna, WI. Contact: FCARC, 1912 Russett Ct. Apt. #7, Appleton, WI 54914, (Aunt) Chad Pennings (N9PRC) (920)993-0485.

SUNDAY, NOVEMBER 14, 1999. The Chicago ARC Ham Auction, DeVry Institute of Technology, 3300 N. Campbell Ave., Chicago, IL 60618.

SUNDAY, NOVEMBER 28, 1999. RADIO FEST, Dupage County Fairgrounds, Wheaton, IL. Contact: GMRS of Illinois, 219 N. Willow Dr., E. Plainfield, IL 60544. 815 436-7090

SATURDAY, JANUARY 8, 2000. 28th Midwinter Swapfest, Waukesha County Expo Center Forum, Waukesha, WI. Contact: WARAC Swapfest, PO Box 1072, Milwaukee, WI 53201, or call Phil, W9NAW (414) 425-3649.

SUNDAY, JANUARY 9, 2000. South Bend Hamfest, South Bend, IN. Contact: Michiana Valley Hamfest Association, 21970 Kern Road, South Bend 46614.

SUNDAY, JANUARY 23, 2000. Wheaton Community Radio Amateurs Mid Winter Hamfest, Cicero, IL. Contact: WCRA, PO Box QSL, Wheaton, IL 60189. www.w9ccu.org

TUESDAY, FEBRUARY 22, 2000. Red Cedar Repeater Assn. AUCTION, American Legion Post 53, 634 Water St., Eau Claire, WI. Contact: Steve Hjart, KA9OMC, E616 810th Ave., Knapp, WI 54749. (715) 665-2374.

SUNDAY, MARCH 12, 2000. SEWFARS SWAPFEST, Waukesha County Expo Center, Waukesha, WI. Contact: SEWFARS, PO Box 102, Delafield, WI 53018 (414) 835-7035.

SUNDAY, MARCH 26, 2000. NRSCfest, Lake County Fairgrounds, Grayslake, IL. Contact: North Shore Radio Club, NS9RC, Box 1066, Highland Park, IL 60035. www.ns9rc.org

FRIDAY-SATURDAY, APRIL 7-8, 2000. AES SUPERFEST 2000

SUNDAY, APRIL 9, 2000. MADISON REPEATER ASSOCIATION SWAPFEST, New location, Stoughton, WI. Contact: MARA, PO Box 8890, Madison, WI 53708-8890. 608 245-8890 <http://www.qsl.net/mara>

SATURDAY, MAY 6, 2000. Ozaukee Radio Club 22nd Annual Radio and Computer Swapfest, Circle-B Recreation Center, Highways 60 and County 1 (located 20 miles north of Milwaukee, west of Grafton). Contact: Joe Holly, ORC Swapfest Chairman, 1702 Holly Lane, Grafton, WI 53024. (262) 377-2137 or Skip Douglas (262) 284-3271.

SUNDAY, JUNE 4, 2000. The Starved Rock Radio Club Hamfest, Bureau County Fairgrounds, Princeton, IL. Contact: EBREDERIS/SSRC, 262 Easy St., Somonauk, IL 60552-9605. website w9mks@arrl.net. e-mail

erb.n9pib@juno.com.

SATURDAY, JUNE 10, 1999. Eau Claire ARC W9EAU Hamfest. Contact: Jim Staatz, KG9MV, PO Box 1867, Eau Claire, WI 54702-1867. (715) 838-9108. e-mail kg9mg@ecol.net web-page <http://www.ecarc.org>

SUNDAY, JUNE 11, 2000. DuPage County Fairgrounds, Wheaton, IL. Contact: Joseph Gutwein, WA9RJI, 7109 Blackburn Ave., Downers Grove IL 60516. 708) 442-4961

SATURDAY, JULY 8, 2000. South Milwaukee Amateur Radio Club Swapfest, American Legion Park, Shepard Avenue, South Milwaukee, WI. Contact South Milwaukee ARC, P.O. Box 102, South Milwaukee, WI 53172. (414) 762-3235.

SATURDAY, AUGUST 12, 2000. Circus City Swapfest, Sauk County Fairgrounds, Baraboo, WI. Contact: Steve Schulze, N9UDO, (608) 356-2313/356-4777 or Bill Klinkner, N9KXX, (608) 643-6908/643-6453. web-page <http://www.thelorax.com/~sschulze/hamfest.htm>

SATURDAY-SUNDAY, SEPTEMBER 16-17, 2000. Peoria Superfest 2000, Peoria IL. Contact Don Stedman, KB9LFD, PO box 3508, Peoria IL 61612-3805. e-mail dls@mtco.com or web site www.mtco.com/~dls

See also the back page and watch for flyer ads for additional information on many of these events.

Let us know of your dates as soon as you know them. We will list them and perhaps help avoid conflicts with other events. As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas. Send information on your event to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

Badger State Smoke Signals

*Amateur Radio
Education and Information*

CHAIRMAN: Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. Telephone (608) 742-3560. kebnetter@palacenet.net

EDITOR: Jim Romelfanger, K9ZZ, 412½ Ash Street, Baraboo, WI 53913. Telephone (608) 356-4031. smokesigs@baraboo.com

TREASURER: Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage WI 53901.

EDITORIAL BOARD: Ken Ebnetter, K9EN; Don Evenson, K9JYX; Jim Romelfanger, K9ZZ.

Subscriptions

1 year	(12 issues)	\$13.95
2 years	(24 issues - save \$1.95)	\$25.95

Subscription form is on page 5. Special club package reduced rates are available. For information, contact Ken Ebnetter, K9EN.

When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1. The only exception is for participating clubs' minutes. Participating clubs are requested to send their material no later than FIVE DAYS after the club's meeting. For example, if a club meets on the 4th of the month, the material should be sent no later than

the 9th of that month. This material is to be sent to the Editor.

Where to Send It

Address changes and corrections, and exchange papers should be sent to Ken Ebnetter.

Editorial material, photographs, and feature articles should be sent to Jim Romelfanger.

Inquiries about advertising should be directed to Ken Ebnetter. Club, swapfest, and Test Point information should be sent to Ken Ebnetter.

Swapfest ADS should be sent to Jim Romelfanger NO LATER THAN EIGHT WEEKS BEFORE THE EVENT'S DATE.

Subscriptions should be sent, with check or money order, to Ken Ebnetter.

Conditions for Reprinting or BBS Posting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles or posting articles on radio or telephone bulletin boards from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. THIS CREDIT IS MANDATORY, AND NO MATERIAL MAY BE PRINTED OR POSTED UNLESS IT IS GIVEN.

This newspaper is produced by volunteer radio amateurs, and is non-profit. This newspaper is mailed from Portage, WI 53901.

Badger State Smoke Signals is incorporated as a Wisconsin non-stock, non-for-profit organization.

Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.



CLUB MEETINGS

Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the September 1999 BSSS meetings column for the latest complete listing. The following changes have been reported to BSSS since that listing.

If your club has no listing, or the latest listing is incorrect, please contact K9EN at the address shown on page 2.

RADIO AMATEURS OF WISCONSIN (R.A.W.) OSHKOSH, WI

R.A.W. is a family oriented club, in which most of it's activities revolve around family doings and outings. Meetings are on the 3rd Saturday of each month at various locations. If you are a Ham or are interested in Ham radio, contact Mark Miller, N9WT, (920) 231-1662 or Duane Ritschke, W9UDXm (920) 233-1684. We are always looking for good people to join us.

The Test Point



Amateur Radio Examination Locations and Schedules in the Wisconsin Area

November 06, 1999	Menomonie, WI
November 06, 1999	Onalaska, WI
November 06, 1999	Oshkosh (Omro), WI
November 06, 1999	Racine, WI
November 06, 1999	St. Paul, MN
November 11, 1999	Apple Valley, MN
November 13, 1999	Blaine, MN
November 13, 1999	Madison, WI
November 16, 1999	Eden Prairie, MN
November 16, 1999	Sheboygan, WI
November 20, 1999	Cottage Grove, MN
November 20, 1999	Loves Park, IL
November 20, 1999	Milwaukee, WI (BE)
November 27, 1999	Bloomington, MN
November 27, 1999	Milwaukee, WI (MRAC)
December 04, 1999	Oshkosh (Omro), WI
December 04, 1999	Racine, WI
December 04, 1999	St. Paul, MN
December 09, 1999	Apple Valley, MN
December 11, 1999	Blaine, MN
December 11, 1999	Madison, WI
December 18, 1999	Cottage Grove, MN
December 18, 1999	Loves Park, IL
December 18, 1999	Milwaukee, WI (BE)
December 18, 1999	Oshkosh, WI (R.A.W.)
December 21, 1999	Eden Prairie, MN
January 06, 2000	Apple Valley, MN
January 08, 2000	Blaine, MN
January 08, 2000	Eau Claire, WI
January 08, 2000	Madison, WI
January 15, 2000	Cottage Grove, MN
January 15, 2000	Loves Park, IL
January 15, 2000	Milwaukee, WI (BE)
January 19, 2000	Eden Prairie, MN
January 22, 2000	Appleton, WI
January 22, 2000	Bloomington, MN
January 29, 2000	Milwaukee, WI (MRAC)
January 29, 2000	Tomahawk, WI
February 05, 2000	Oshkosh (Omro), WI
February 05, 2000	Racine, WI
February 05, 2000	St. Paul, MN
February 10, 2000	Apple Valley, MN
February 12, 2000	Blaine, MN
February 12, 2000	Madison, WI
February 15, 2000	Eden Prairie, MN
February 19, 2000	Cottage Grove, MN
February 19, 2000	Loves Park, IL
February 19, 2000	Milwaukee, WI (BE)
February 19, 2000	Oshkosh, WI
February 26, 2000	Bloomington, MN
February 26, 2000	Milwaukee, WI (MRAC)
February 26, 2000	Tomahawk, WI
March 04, 2000	Oshkosh (Omro), WI
March 04, 2000	Racine, WI
March 04, 2000	St. Paul, MN
March 09, 2000	Apple Valley, MN
March 11, 2000	Blaine, MN
March 11, 2000	Madison, WI
March 18, 2000	Cottage Grove, MN
March 18, 2000	Loves Park, IL
March 18, 2000	Milwaukee, WI (BE)
March 21, 2000	Eden Prairie, MN
March 25, 2000	Appleton, WI
March 25, 2000	Bloomington, MN
March 25, 2000	Milwaukee, WI (MRAC)
March 25, 2000	Tomahawk, WI
May 13, 2000	Manitowoc, WI
April 22, 2000	Oshkosh, WI
September 09, 2000	Appleton, WI
October 21, 2000	Oshkosh, WI
November 05, 2000	Kaukauna, WI
December 2000	Oshkosh, WI
January 27, 2001	Appleton, WI
Monthly, 1st Sat.	Racine, WI
(except January, July & August)	
Monthly, 1st Sat.	Oshkosh (Omro), WI
Monthly, 1st Sat.	St. Paul, MN
Monthly, 2nd Thu.	Apple Valley, MN
Monthly, 2nd Sat.	Madison, WI
Monthly, 2nd Sat.	Blaine, MN
Monthly, 3rd Tue.	Eden Prairie, MN
Monthly, 3rd Sat.	Milwaukee, WI (BE)
Monthly, 3rd Sat.	Loves Park, IL
Monthly, 3rd Sat.	Cottage Grove, MN
Monthly, 4th Sat.	Bloomington, MN
Monthly, Last Sat.	Milwaukee, WI (MRAC)
(except December)	

Monthly, Last Sat. Tomahawk, WI
(January thru October only)
Quarterly Eau Claire, WI
(Second Saturday Jan., Apr., &
Oct.) plus annual summer hamfest.)

GENERAL RULES FOR MOST EXAMINATIONS

Be sure to check with sponsors before going to an examination session. There may be changes and/or errors in the dates or information given. Some examinations require filing an FCC or NCVEC Form 605 and advance registration at least 30 days before the exam date.

Some VE teams permit walk-ins. Check with the sponsor.

Many hamfests and swapfests offer examinations. A hamfest entrance fee should not be charged if you come only to attend the examination.

To register in advance, you must get a copy of the current FCC Form 605, and fill it out completely and correctly. Got your form from the FCC as instructed below, or from the American Radio Relay League, 225 Main Street, Newington, CT 06111. Please send an SASE if you request a form from the League. FCC Field Offices seldom stock forms. You can also get a form from

<http://www.fcc.gov/formpage.html> or
<ftp://ftp.fcc.gov/pub/Forms/Form605>.

A form by FAX is available at (202) 418-0177 (request Form 000605). The FCC Forms Distribution Center will accept orders at (800) 418-3676.

Form 605 has a main form, plus a Schedule D with two parts (for Vanity and Physician's Certifications). Forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$6.45 payable to "ARRL/VEC". Exam fees change annually. See QST, WIAW bulletins, or The ARRL Letter regarding any annual exam fee changes.

FCC requires applicants to show their original amateur license or CSCE to the VE team. You must also have a good copy of your license or CSCE. A copy of your license or CSCE must be attached to your FCC form 605 and most VE teams need a copy for their records. One good CSCE copy is sufficient. You are also required to have a photo ID, or two other forms of ID. Contact the VE team for details.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only. Proof must be either in the form of a pre-3/21/87 license document or a "Letter of Verification of Technician License Held Prior to 1987" as requested in writing from the FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245.

For those with internet access, a listing of exam sessions is available from:

<http://www.arrl.org/arrlvec/examsearch.html>

By checking this page, you can find registered VE sessions anywhere in US and some overseas. You can search by country, state or zip code. The listing is not specific to any particular VEC. It is a master database.

Thanks to Bart Jahnke, W9JJ, ARRL/VEC

MILWAUKEE RADIO AMATEURS CLUB MILWAUKEE (MRAC/VEC)

Last Saturday, except June, July, and August, 9:30 a.m. to noon at Amateur Electronic Supply (AES), 5710 W. Good Hope Road, Milwaukee. For additional information, call (414) 797- MRAC (answering machine) or (414) 797-6722. Bring along your original license, CSCE (if any), and one (1) good quality photocopy of each, plus two forms of identification, such as driver's license, etc. Also required is \$6.40 for the exam fee. Walk-ins are welcome. To register in advance, use a post card: Print the grade of license you are applying for, your name, address, and telephone number, and send the card to MRAC/VEC, Milwaukee Radio Amateurs Club, PO Box 25707, Milwaukee, WI 53225.

BADGER EXAMINERS (BE) - MILWAUKEE

Every third Saturday morning, 9:30 a.m. to noon. Badger Examiners group tests at AES (Amateur Electronic Supply) at 60th and Good Hope, Milwaukee. Exams are given at the old Serman Printing shop, just 300 feet west of the AES store. Novice to Extra are offered, and all test materials are provided. Fee is \$6.35, and bring your original license, or CSCE if needed.

Also available are Commercial license exams GROL (General Radiotelephone license), GMDSS, Telegraph, Etc. Fee is \$35.00. For more information call Gary Sharbuno, W19M at (414) 355-0237.

MADISON, WI

Every second Saturday morning at 8 a.m. VE exams are held in Madison. They are held at the operations building of the Madison Metropolitan Sewerage District at 1610 Moorland Rd. Directions: Take the Beltline (Hwy 12 and 18) to South Towne Drive. Go south 8/10 mile until South Towne Drive makes a bend and becomes Moorland Road and enter at gate. You should bring a picture ID, your

original licence and a copy of your licence. For exams beyond the novice tests, bring a check for \$6.35, made out to the ARRL/VEC. If the special 610 form with the medical exemption is required, contact me beforehand to obtain one. No appointments are necessary to take exams. For further questions, please leave a message on the mailbox or phone me at (608) 832-6631.

Mark Jenks, NZ9B

MENOMONIE, WI

Saturday, November 6, 1999: The Menomonie area hams will conduct VE exams for all classes of licenses. The location will be the U.W.-Stout Communications Center, 820 South Broadway, Menomonie Wisconsin. Walk-ins only. Arrive between 9:00 and 11:00 a.m. For information, contact Jim Ley, NX9F, 715-232-1397 (W) or

STEVENS POINT, WI - ARRL/VEC

ARRL Exams in Stevens Point. Time: 0930. Place: A107 Science Building, on campus at UWSP (corner of Fourth and Reserve streets) For more information contact Joe Larson, N9JW, at 715- 344-1182 evenings or email to joel8@bigfoot.com.

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August. Monthly exams are given 9 to 11 a.m. at the Park United Methodist Church, 1013 Harmony Drive, Racine. Walk-ins are permitted. Talk in on 147.87/27. Inquiries and registrations should be directed to Robert N. Jensen, W0WLN, 5616 Cambridge Lane #6, Racine, WI. Telephone (414) 886-8551.

TOMAHAWK, WI

Last Saturday of every month, Jan. thru Oct. Tomahawk Volunteer Examiners (ARRL/VEC) Tomahawk, WI. No advance registration required, but appointment would be appreciated. Registration at 8:30 a.m. and testing starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz, repeater or contact Terry Collins, KB9AUP, W6564 Highway 8, Tomahawk, WI 54487. Telephone (715) 453-4633.

APPLETON, WI - ARRL/VEC

MANITOWOC, WI (HAMFEST)

KAUKAUNA, WI (HAMFEST)

Volunteer exam testing information for the Fox Cities Amateur Radio Club. All test sessions are held at the American Red Cross building in Appleton. For more detailed information contact George Croy, e-mail to: W9MDP@arrl.net or call 920-730-0967.

The following is the exam schedule for year 2000.

January 22, 2000 Appleton Red Cross Building
March 25, 2000 Appleton Red Cross Building
May 13, 2000 Manitowoc-Manicorad Club Hamfest
September 9, 2000 Appleton Red Cross Building
November 5, 2000 Kaukauna - FCARC Hamfest
January 27, 2001 - Appleton Red Cross Building

OSHKOSH (OMRO)

The Oshkosh VE Team will administer Amateur Radio exams monthly on the first Saturday. Registration begins at 8:30 a.m. and exams will be given from 9 a.m. until noon at the Omro Community Center, 130 W. Larrabee, Omro, WI. Walk-ins welcomed. Bring a good quality photocopy of your original license and any other necessary documents such as a CSCE, etc. The first session will be through W5YI/VEC, and then sessions will alternate between ARRL/VEC and W5YI/VEC. The exam fee is \$6.35. For more information, please call Dick Lemme, K9FA, at (920) 235-0987, e-mail lemme@vbe.com, or write Dick at 826 Jefferson Street, Oshkosh, WI 54901.

OSHKOSH, WI (R.A.W.) - (W5YI/VEC)

Dec. 18, 1999

Feb. 19, 2000

Apr. 22, 2000

Oct. 21, 2000

Dec. 16, 2000

Sponsored by Radio Amateurs of Wisconsin (R.A.W.) Testing sessions at UW Oshkosh, College of Nursing Building, 845 Algoma Blvd., Room 211, Oshkosh, WI. Park free in lot 29 on side of building or in lot 25 behind the building. Registration start at 9 a.m. \$6.35 per test. Bring 2 forms of id etc. Walk-ins are welcome. Contact: Mark Miller, N9WT, (920) 231-1662 or Mike O'Conner, K9II (920) 231-7093.

EAU CLAIRE, WI

The Eau Claire ARC will hold exam sessions on the second Saturday in the months of January, April, and October, as well as on the date of their annual hamfest during the summer. For more info: Steve Bluem KA9OMY 715-839-6509.

(continued on page 11)

HF "intruder" apparently buzzes off

The loud 125-Hz buzz that plagued 80 and 75-meter operators for several weeks reportedly has moved outside the amateur bands. The ARRL Monitoring System had requested FCC assistance in tracking down the harmful interference, which has been audible primarily in the US Northeast.

According to a reliable source who did not wish to be identified, the transmissions heard on 3.5, 3.6 and 3.7 MHz emanated from high-power HF radar transmitters being operated by the Canadian military from Newfoundland. The operation reportedly had the blessing of Industry Canada -- the Canadian equivalent of the FCC -- and hams in Newfoundland also were said to have been informed.

The "buzz" is said to have come from two HF over-the-surface radar test stations in Newfoundland that have been conducting tests with the Canadian military. Those tests reportedly continue, but on other frequencies. The radars -- with a bandwidth of approximately 20 kHz -- are said to be used to detect vessels and icebergs. The tests reportedly are being done to determine the optimum frequency for coverage.

Amateur Radio concerns about the signal were relayed to those in charge of the military HF radar operation.

IARU Region 2 Monitoring System Coordinator Martin Potter, VE3OAT, has

been unable so far to officially confirm the accounts but said it does appear that the signal is gone from 80 meters. Potter said that "while there are many buzzes and burps on our bands," the buzz on 80 has not been spotted in recent days. Potter says that since October 7, the distinctive signal has been on the air mostly on 3.3 MHz, twice on 3.2 MHz, and once on 4.1 MHz -- simultaneous with 3.3 MHz "indicating more than one transmitter," he said.

Potter credited amateur complaints with prompting the move. "It seems likely that the volume of complaints and the high technical quality of many of the reports had a positive impact on the government and corporate officers who received them," he speculated.

Recent news reports concerning the 80-meter buzz generated a flurry of informal reports from hams in various parts of the US and at least one in Europe to ARRL Intruder Watch Coordinator Tom Hogerty, KC1J. Some said they'd heard the "buzz saw" on bands other than 80 meters, although the Newfoundland transmitters reportedly are not licensed to operate on frequencies higher than the vicinity of 80 meters.

The individual familiar with the Newfoundland experiments reported being told that there are a "significant" number of HF radars under development around the world and conceded that it's possible that hams are hearing similar signals from more than one of these other sources.

Additional reports and observations are welcome to ARRL Monitoring System Administrator Tom Hogerty, KC1J, <thogerty@arrrl.org>.

The ARRL Letter

Spencer Clope, W9LDH: Hamming for 65 years

Larry McCalvy, WA9JMO, Chapter 162's incoming President presenting a QCWA certificate attesting to 65 years as a licensed Ham to Spencer Clope, W9LDH who has completed two years at the Chapter's helm.



Photo courtesy
Larry McCalvy,
WA9JMO

<http://www.bsss.org>

MILWAUKEE REPEATER CLUB 15TH ANNUAL AMATEUR RADIO COMPUTER EXPO Saturday, November 6, 1999 Waukesha County Expo Center 8:00 A.M. - 5:00 P.M.

Featuring:

Amateur Radio & Electronics

New, Used, Parts Galore!

Computer Companies

New Systems, Parts and Accessories

**Internet Service Providers
& Web Page Designers**

20 miles west of Milwaukee

Ample Free Parking • Handicap Accessible

Pancake Breakfast • Lunch Served

Attention card advertisers!

Renewal notices for business card ads in BSSS were mailed in mid-September. A few have renewed, but some have not. If you wish to have your business or swapfest ad continue, please read the renewal notice you received, complete the small form, and use the enclosed self-addressed, stamped envelope to keep your ad running. If you want to change your ad's copy or layout, please include that as well. Please note also that we have one swapfest ad space available. These all should be sent to Jim Romelfanger, K9ZZ, editor, 412½ Ash Street, Baraboo, WI 53913-2501. See page 2 for telephone and email info. Thanks!

Fraud

Continued from front page

authorities should send him "original proof" that fraud occurred. He said this means original documentation, letters, correspondence and similar material as well as the amount of money and the dates involved.

Those believing they were victimized by Kirby can e-mail Luther for more information at <panamaone@aol.com> or call him at 850-872-3129.

The ARRL Letter

American Red Cross needs communicators

Let me introduce myself, and tell you who I am and what I do with the Red Cross.

My name is Bruce Micales (WA2DEU). I am a Red Cross volunteer, and am the co-chair of the Communications Function for the American Red Cross Badger chapter in Madison Wisconsin. I am also a member of American Red Cross Wisconsin State Communications Committee. As a member of this Red Cross committee, I wish to encourage all the Amateur Radio operators in the state of Wisconsin to contact their local Red Cross chapters and make their services available during a disaster event. I realize that many hams are ARES/RACES members and have other obligations to the this organization. The American Red Cross does not wish to conflict with these or other obligations. Therefore, I'd suggest that you contact your local EC to determine what arrangement the local ARES/RACES does have with the Red Cross. The ARRL and the American Red Cross have published a Statement of Understanding that can serve as a template for an agreement between the local Red Cross and ARES/RACES (if one is required). See below for contact information.

Solar Cycle Progression

By Woody Minar, K9EF

The following article was published by the Space Environment Center in Boulder, CO in Issue 27 S.E.C. User Notes, October 1999.

"Solar Cycle Progression updates are once again available through the SEC ftp system

<gopher://gopher.sec.noaa.gov/>.

"For years SEC provided plots of observed solar cycles as well as a forecasted cycle in SEC's "Weekly" publication. Only recently have the updated solar cycle data and forecast plot been made available monthly. The new plot files are updated the first week of every month.

"The solar cycle files contain three parameters: sunspot number, 10.7 cm radio flux, and planetary magnetic index (Ap). The files use preliminary and estimated values of the solar cycle parameters until official values become available, usually issued within two months, from the respective issuing agencies. Predictions of sunspot number and radio flux represent the finding of the Solar Cycle 23 Project, an international panel of 12 scientists that convened annual from 1996-1999. A summary of the panel's finding is available at <http://www.sec.noaa.gov/info/Cycle23.html>.

"Under the directory "Solar Cycle Progression Graphs, Predicted values, and Recent Indices" you will find the following files:

- Recent Solar Indices of Observed Monthly Mean Values (text) -- Table shows solar and geomagnetic indices running from January 1991 to the present. The table includes sunspot numbers, radio flux, and geomagnetic Ap values.

- Predicted Sunspot Number and Radio Flux Values (text) -- Table runs from the most current prediction through December 2005. The last 13-month running smoothed value is always 6 months behind the issue date. High and low bounds to the forecast are also provided.

- Solar Cycle Sunspot Number Progression (gif image) -- Plot displays monthly sunspot number, 13-month running smoothed sunspot numbers, and the most recent forecast. ...

- Solar Cycle F10.7cm Radio Flux Progression (gif image) -- plot displays monthly Pentiction 10.7cm Radio Flux values, 13-month running smoothed values, and the most recent forecast.

- Solar Cycle Ap Progression (gif image) -- Plot displays monthly average Ap values and 13-month running smoothed Ap values."

(Woody can be emailed at

<WoodyMinar@centurytel.net>).

The recent events of Hurricane Floyd plus past events in WI show the value of the Amateur Radio Service in the beginning (or until the normal modes of communications have been reestablished) of any disaster relief operation. In addition, with Y2K approaching, the Amateur Radio Service will be highly sought after should normal communications fail.

Contacting your local Red Cross now would save valuable time in locating alternate communications

methods during a disaster.

If your local Red Cross does already have a working relationship with the local ham club and ARES/RACES group, please contact these organizations and get involved. In addition, there are some Red Cross classes and workshops that I would highly recommend (Introduction to Disaster Services, Damage Assessment, Shelter Operations, ERV Workshop, and Communications Workshop). Taking these classes or workshops does not make you a Red Cross volunteer.

If you have any questions and/or comments, you may contact me at: Bruce Micales, 608-833-7350 (h), or <bmicales@facstaff.wisc.edu> (e-mail). □

MFJ TUNERS

MFJ-989C Legal Limit Antenna Tuner

MFJ uses super heavy duty components to make the world's finest legal limit tuner

MFJ uses super heavy duty components -- roller inductor, variable capacitors, antenna switch and balun -- to build the world's most popular high power antenna tuner.

The rugged world famous MFJ-989C handles 3 KW PEP SSB amplifier input power (1500 Watts PEP SSB output power). Covers 1.8 to 30 MHz, including MARS and WARC bands.

MFJ's AirCore™ roller inductor, new gear-driven turns counter and weighted spinner knob gives you exact inductance control for absolute minimum SWR.

You can match dipoles, verticals, inverted vees, random wires, beams, mobile whips,

shortwave -- nearly any antenna. Use coax, random wire or balanced lines.

You get everything you've ever wanted in a high power, full featured antenna tuner -- widest matching range, lighted Cross-

Needle SWR/Wattmeter, massive transmitting variable capacitors, ceramic antenna switch, built-in dummy load, TrueCurrent™ Balun, scratch-proof Lexan front panel -- all in a sleek compact cabinet (10 1/2" W x 4 1/2" H x 15 D in).



MFJ AirCore™ Roller Inductor gives high-Q, low loss, high efficiency and high power handling.

MFJ's exclusive Self-Resonance Killer™ keeps damaging self-resonances away from your operating frequency.

Large, self-cleaning wiping contact gives good low-resistance connection. Solid 1/4 inch brass shaft, self-align bearings give smooth non-binding rotation.

MFJ No Matter What™ Warranty

MFJ will repair or replace your MFJ-989C (at our option) no matter what for one year.

More hams use MFJ tuners than all other tuners in the world!

MFJ-986 Two knob Differential-T™

Two knob tuning (differential capacitor and AirCore™ roller inductor) makes tuning foolproof and easier than ever. Gives minimum SWR at only one setting. Handles 3 KW PEP SSB amplifier input power (1.5 KW output). Gear-driven turns counter, lighted peak/average Cross-Needle SWR/Wattmeter, antenna switch, balun. 1.8 to 30 MHz. 10 1/2" W x 4 1/2" H x 15 in.

MFJ-986 \$329.95

MFJ-962D compact Tuner for Amps

A few more dollars steps you up to a KW tuner for an amp later. Handles 1.5 KW PEP SSB amplifier input power (800W output). Ideal for Ameritron's AL-811H! AirCore™ roller inductor, gear-driven turns counter, pk/avg lighted Cross-Needle SWR/Wattmeter, antenna switch, balun, Lexan front, 1.8-30MHz. 10 1/2" W x 4 1/2" H x 10 1/2" in.

MFJ-969 300W Roller Inductor Tuner

Superb AirCore™ Roller Inductor tuning. Covers 6 Meters thru 160 Meters! 300 Watts PEP SSB. Active true peak reading lighted Cross-Needle SWR Wattmeter, QRM-Free PreTune™, antenna switch, dummy load, 4:1 balun, Lexan front panel. 3 1/2" H x 10 1/2" W x 9 1/2" D inches.

MFJ-969 \$189.95

MFJ-949E deluxe 300 Watt Tuner

More hams use MFJ-949s than any other antenna tuner in the world! Handles 300 Watts. Full 1.8 to 30 MHz coverage, 48 position Precision48™ inductor, 1000 Volt tuning capacitors, full size peak/average lighted Cross-Needle SWR/Wattmeter, 8 position antenna switch, dummy load, QRM-Free PreTune™, scratch proof Lexan front panel. 3 1/2" H x 10 1/2" W x 7 D inches.

MFJ-948, \$129.95. Economy version of MFJ-949E, less dummy load, Lexan front panel.

MFJ-941E super value Tuner

The most for your money! Handles 300 Watts PEP, covers 1.8-30 MHz, lighted Cross-Needle SWR/Wattmeter, 8 position antenna switch, 4:1 balun, 1000 volt capacitors, Lexan front panel. Sleek 10 1/2" W x 2 1/2" H x 7 D in.

MFJ-945E HF+6 Meter mobile Tuner

Extends your mobile antenna bandwidth so you don't have to stop, go outside and adjust your antenna. Tiny 8x2x6 in. Lighted Cross-Needle SWR/Wattmeter. Lamp and bypass switches. Covers 1.8-30 MHz and 6 Meters. 300 Watts PEP. MFJ-20, \$4.95, mobile mount.

MFJ-971 portable/QRP Tuner

Tunes coax, balanced lines, random wire 1.8-30 MHz. Cross-Needle Meter. SWR, 30/300 or 6 Watt QRP ranges. Matches popular MFJ transceivers. Tiny 6x6 1/2" x 2 1/2" inches.

MFJ-901B smallest Versa Tuner

MFJ's smallest (5x2x6 in.) and most affordable wide range 200 Watt PEP Versa tuner. Covers 1.8 to 30 MHz. Great for matching solid state rigs to linear amps.

MFJ-949E deluxe 300 Watt Tuner

More hams use MFJ-949s than any other antenna tuner in the world! Handles 300 Watts. Full 1.8 to 30 MHz coverage, 48 position Precision48™ inductor, 1000 Volt tuning capacitors, full size peak/average lighted Cross-Needle SWR/Wattmeter, 8 position antenna switch, dummy load, QRM-Free PreTune™, scratch proof Lexan front panel. 3 1/2" H x 10 1/2" W x 7 D inches.

MFJ-948, \$129.95. Economy version of MFJ-949E, less dummy load, Lexan front panel.

MFJ-941E super value Tuner

The most for your money! Handles 300 Watts PEP, covers 1.8-30 MHz, lighted Cross-Needle SWR/Wattmeter, 8 position antenna switch, 4:1 balun, 1000 volt capacitors, Lexan front panel. Sleek 10 1/2" W x 2 1/2" H x 7 D in.

MFJ-945E HF+6 Meter mobile Tuner

Extends your mobile antenna bandwidth so you don't have to stop, go outside and adjust your antenna. Tiny 8x2x6 in. Lighted Cross-Needle SWR/Wattmeter. Lamp and bypass switches. Covers 1.8-30 MHz and 6 Meters. 300 Watts PEP. MFJ-20, \$4.95, mobile mount.

MFJ-971 portable/QRP Tuner

Tunes coax, balanced lines, random wire 1.8-30 MHz. Cross-Needle Meter. SWR, 30/300 or 6 Watt QRP ranges. Matches popular MFJ transceivers. Tiny 6x6 1/2" x 2 1/2" inches.

MFJ-901B smallest Versa Tuner

MFJ's smallest (5x2x6 in.) and most affordable wide range 200 Watt PEP Versa tuner. Covers 1.8 to 30 MHz. Great for matching solid state rigs to linear amps.

MFJ-901B \$79.95

MFJ-16010 random wire Tuner

Operate all bands anywhere with MFJ's reversible L-network. Turns random wire into powerful transmitting antenna. 1.8-30 MHz. 200 Watts PEP. Tiny 2x3x4 in.

MFJ-906/903 6 Meter Tuners

MFJ-906 has lighted Cross-Needle SWR/Wattmeter, bypass switch. Handles 100 W FM, 200W SSB. MFJ-903, \$49.95, Like MFJ-906, less SWR/Wattmeter, bypass switch.

MFJ-921/924 VHF/UHF Tuners

MFJ-921 covers 2 Meters/220 MHz. MFJ-924 covers 440 MHz. SWR/Wattmeter. 8x2 1/2" x 3 inches. Simple 2-knob tuning for mobile or base.

MFJ-922 144/440 MHz Tuner

Ultra tiny 4x2 1/2" x 1 1/2" inch tuner covers VHF 136-175 MHz and UHF 420-460 MHz. SWR/Wattmeter reads 60/150 Watts.

MFJ-931 artificial RF Ground

Creates artificial RF ground. Also electrically places a far away RF ground directly at your rig by tuning out reactance of connecting wire. Eliminates RF hot spots, RF feedback, TVI/RFI, weak signals caused by poor RF grounding. MFJ-934, \$169.95, Artificial ground/300 Watt Tuner/Cross-Needle SWR/Wattmeter.

Free MFJ Catalog and Nearest Dealer ... 800-647-1800

http://www.mfjenterprises.com

1 Year No Matter What™ warranty + 30 day money back guarantee (less s/h) on orders from MFJ

MFJ ENTERPRISES, INC. Box 494, Miss. State, MS 39762 (601) 323-5869; 8-4:30 CST, Mon-Fri FAX: (601) 323-6551; Add s/h Tech Help: (601) 323-0549

Prices and specifications subject to change. (c) 1998 MFJ Enterprises, Inc.

BADGER STATE SMOKE SIGNALS

Subscription Form Regular Individual Subscription Rates

1 Year: \$13.95 • 2 Years: \$25.95 (save \$1.95)

PLEASE PRINT!

Name: _____ Call Sign (if any): _____

Address: _____ City: _____ State: _____ ZIP: _____

☐ 1 Year ☐ 2 Years ☐ New ☐ Renewal

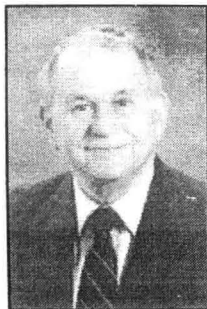
Send this form, with your check or money order, to Ken Ebnetter, 822 Wauona Trail, Portage, WI 53901.

Please do NOT send cash!

NOVEMBER 1999

The Computer Corner

By Stan Kaplan, WB9RQR • 105 Martin Drive
Port Washington, WI 53074-9654
(414) 284-9346
WB9RQR @ N9PBY.EN63BI.WI.USA.NA
SKAPLAN @ MCW.EDU



No. 72: Back Up That Registry!

Have you ever had the gremlin in your computer strike, making mincemeat of your registry so that Windows couldn't seem to do anything except give you cryptic error messages? I am not talking about a virus attack here. I am describing a seemingly random corruption of the registry that can essentially destroy the integrity of that Windows installation that you worked so hard to personalize and fit to your needs. It can happen for no apparent reason. No one can explain it. It probably occurs because Windows is such a bloated, unnecessarily complex program that the occasional random change in a single byte of information (perhaps due to a cosmic ray going through your computer) can do a tremendous amount of damage to the logical processes. Well, I have had it happen to me on more than one occasion.

The first time or two, I simply bit the bullet and reinstalled Windows, a process that takes only an hour initially but tens of hours to mold the program back into your personalized version. Then, I began using a parallel port tape backup, which worked well and saved me from untold grief on more than one occasion. Now, although I still make complete backups of everything on my hard drive every three months, I have found an easier way to repair the occasional registry glitch. It is quick, easy and it works. However, it does require that you have the latest version of Norton Utilities for Windows mounted on your computer. Designed for both Win95 and 98; the latest version is called Norton System Works 2000. It is not just a good program; it is a GREAT program. This software package is really a rather large suite of programs, any one of which is worth the price of the whole thing. Since Symantec (the company that owns NSW 2000) recently purchased Cleansweep, (another excellent program), all of Cleansweep is also included in NSW 2000. I have said before that the Norton package should be your very first purchase of software after Windows. I personally will not be without it.

Well, what the heck is this registry thing? It is just a big, fat database, but a critical one. It tells Windows everything it needs to know to run itself. It records what directories (folders) are present, what drivers to use for what equipment and where they are located, what kind of sound card, hard drive, floppy drive, modem is in the belly of your computer, and so on and so on. Each little bit of information about one thing or another is called a key; each key is sort of like a one-line statement describing whatever it describes. The keys are organized in a way that makes it possible for Windows to find information fairly quickly. The computer I am typing this on tonight has over 20,000 such keys! My other one across the room has just under 30,000! Talk about bloated!

Well, I am sure you can imagine that anything that scrambles even one of those keys can wreak havoc with your machine. So what is my latest fix? Back up the registry often, and if a bad glitch occurs, restore it.

Here are details. First, run Norton System check (several minutes) to make sure everything is OK. If System Check finds any errors, let it fix the problems. Then continue to work, observing everything is to your liking. A couple of days later, when you have confirmed that all seems OK, run System Check again. If no errors are found, back up the registry RIGHT THEN. You will be fairly certain to be creating a backup of a perfect registry. Here is how.

Click the Norton System Works icon, then Norton Utilities, then Troubleshoot, then

the Norton Registry Editor. When the Registry Editor window appears, click File, then Backup Entire Registry. It will then prompt you for a name for the backup. I use 19991101.reg to denote the date of the backup, using the new International Date Convention. Either note carefully where Norton wants to put the backup, or choose a subdirectory that you prefer. I use a Backups subdirectory on my E: drive to store these. Then let her rip. It will probably take a full minute or longer to write all those lines. Don't be fooled if the window disappears - it is still writing. The backup window is set to drop into the system tray at the bottom of your screen after the first couple of dozen keys. You can call it right back on your screen by finding it in the tray and clicking on it. That way you can watch it complete the job.

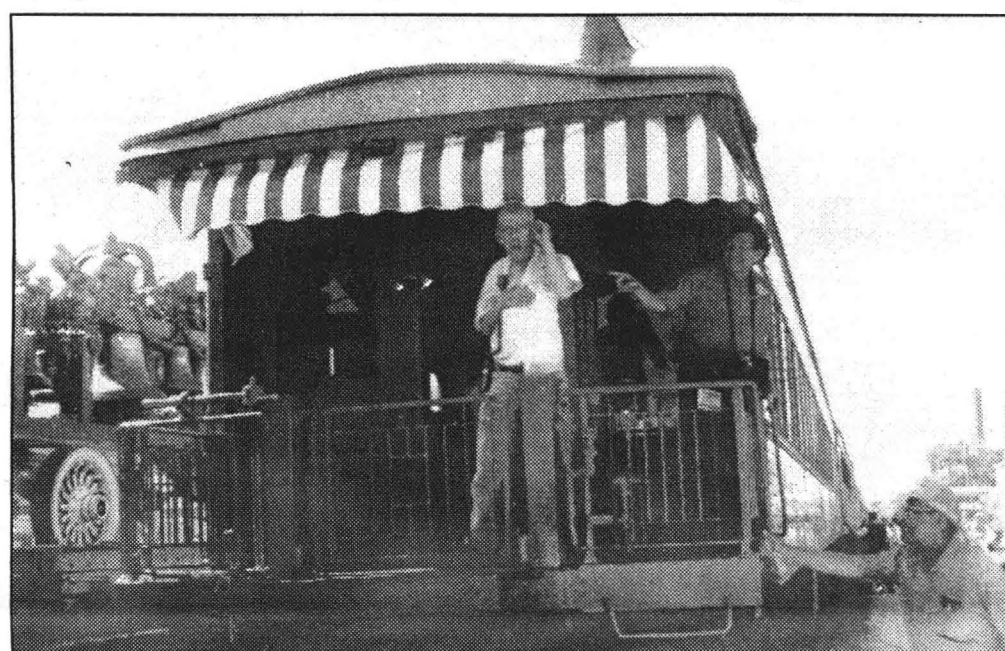
Continue to do this about once a week so long as your machine is working to your satisfaction. Always do a system check first, to make sure all is well. After a month or so - 3 to 5 backups, you can start deleting the oldest backup each time you make a new one. You don't want to leave useless, outdated backups on your hard drive because they take a lot of space. The backups on my smaller machine occupy nearly 3 megabytes each!

Now, if a big bad glitch occurs, you can at least restore a perfect copy of your registry. Open the Integrator again, click Troubleshoot and then the Registry Editor. Again click File, but this time Import Registry File. Find your latest backup and select it as the file to be imported. In a minute or so, everything will be back the way it was.

Darned gremlins! We'll beat 'em yet!! Happy computing!

Reprinted, by permission, from the ORC Newsletter, Ozaukee Radio Club, 101 E. Clay Street, Saukville, Wisconsin 53080-1903 (Skip Douglas, KA9DDN, Editor). □

After a long and winding road



This picture was taken in Milwaukee on July 5, 1999, on a day with the heat index hovering around 120 degrees. The haggard guy trying to keep his glasses on and his shirt tucked in (and failing at both) is me, your editor. The Great Circus Train had come to its stop, and cuts of flatcars were being taken out of the train. Just to the right is photographer Cy White, and holding a rail at right is George Halper, W9SUF. At frame left is the famous Ringling Bros. Bell Wagon, seen in the motion picture "The Greatest Show on Earth", a Cecile B. DeMille "spec".

Photo by Al Johnson, AA7CS

Where's the APRS column?

Tom Weeden, WJ9H, writer of the informative APRS column series, has taken a month's vacation from scribing. Hey, he has earned it. He will return in December with more about one of Amateur Radio's most intriguing, interesting and useful appli-

cations - the Automatic Packet Reporting System.

Tom, enjoy your month off, and we will await further enlightenment of the masses about APRS with great anticipation. Thanks for all the hard work on your series thus far.

When does 1 = 57?

1 donor
can save the lives of
7 people through organ donation, and
improve the lives of another 50 people
through tissue donation.

*To become a donor, talk to your family today.
Their consent will be needed for
your wishes to be honored.*

For more information call the
University of Wisconsin
Organ Procurement Program
(608) 263-1341, 9 a.m. - 5 p.m.
or
(608) 262-9868 after 5 p.m.



VARI-NOTCH® DUPLEXERS FOR 2 METERS

The TX RX Systems Inc. patented Vari-Notch filter circuit, a pseudo-bandpass design, provides low loss, high TX to RX, and between-channel isolation, excellent for amateur band applications. TX RX Systems Inc. has been manufacturing multicoupling systems since 1976. Other models available for 220 and 440 MHz, UHF ATV and 1.2 GHz.

MODEL 28-37-02A

144-174 MHz
92 dB ISOLATION AT 0.6 MHz SEPARATION
400 WATT POWER RATING

TX RX SYSTEMS INC.

Dave Barquist, K9PAK, Factory Representative
414-367-2929 or E-Mail txrx@electpdcts.com



19" RACK MOUNT



PARTICIPATING CLUBS AND ORGANIZATIONS

The Racine Megacycle Club



Club Station W9UDU • Racine, WI
Dennis Doonan, W9DAD, Secretary
c/o RMC • P.O. Box 3 • Racine, WI 54301-0003
e-mail: w9udu@wi.net

Web: <http://www2.wi.net/~hamradio/>
Voice mail: (414) 552-6RMC • ARRL Affiliated

Providing communications for American Red Cross and ARES

MEETING MINUTES September 13, 1999

The September 13, 1999 regular membership meeting of the Racine Megacycle Club Inc. was opened at 7:34 PM by President Rees, K9UUT. Vice President Bob, WE9EH, Secretary Dennis, W9DAD, Treasurer Greg, KB9RMA, and Activities Director Kevin, KB9LLV, were present. There was a total of 11 members present.

Secretary W9DAD read the minutes of the July meeting.

Treasurer KB9RMA read the treasurer's report.

Activities Director KB9LLV summarized the first annual RMC club picnic which was held August 15, 3 p.m., at Stuart McBride Park.

Bob, W9EH, talked about the RMC sponsored Amateur Radio and Electronics auction to be held October 1, 1999.

President K9UUT started a discussion about the November RMC elections. Vice President W9EH read the RMC procedures for selecting a nominating committee. President K9UUT appointed Phil, KC9IS, as nominating committee chair. Don, KB9HAM, also agreed to be on the committee. A third member is yet to be named.

With the formal business part of the meeting over, President K9UUT demonstrated the capabilities of both the RMC Web site and the meeting facilities at Gateway Technical College. K9UUT sent an e-mail directly to N9LTA all the way to Kenosha! The RMC web site and its links were demonstrated. K9UUT also showed the FCC's new ULS site, while W9EH read the new registration requirements. The meeting ended with a demonstration of DVD movie technology.

Submitted by Dennis, W9DAD
secretary to the Racine Megacycle Club



SHEBOYGAN County Amateur Radio Club

Sky Borkenhagen, N9XRU, Secretary
N6466 Plank Circle • Glenbeulah WI 53023

2-Meter Repeater: 147.06 Output

The SCARC meetings are held every second Tuesday of the month in the Red Cross building at 2032 Erie Ave. in Sheboygan.

Our annual Membership Steak Fry was held on Tuesday, Oct. 12th at the Pine Club, N.W. corner of 15th and Geele, Sheboygan beginning at 6:30 p.m. This replaced our regular club meeting for the month.

The Saturday morning Sheboygan ham breakfast is held at the following venues. Hams, spouses, hangers on and such are welcome. For addresses, phone numbers etc., see the yellow pages:

1st Saturday at 8:00 a.m. - Jumes in Sheboygan

2nd Saturday at 8:00 a.m. - Family Restaurant in Cleveland

3rd Saturday at 8:00 a.m. - Jumping Jacks - Kohler Sports Core

4th Saturday at 8:00 a.m. - Park View restaurant County PP Sheb Falls

5th Saturday at 8:00 a.m. - Farm Hill Res-

taurant, Cty V & OK

Just a reminder, if you use e-mail, consider signing up on the Sheboygan Hams mailing list. Simply submit your e-mail address to:

<julian@bongo.tele.com>

All e-mail sent to

<shebham@tele.com>

will be forwarded to all listed subscribers.

Thanks again to N6ARE for providing this mail server for SCARC use!

For those of you who do not have an e-mail address and have correspondence for the club, our address is: SCARC, P.O. Box 1282, Sheboygan, WI 53082-1282.

Net Schedule

8:00 pm Monday nights, SCARC Fun Net, 147.060, PL 107.2+

Respectfully submitted:
Sky Borkenhagen, N9XRU

Mancorad Radio Club

Mary Langer, KB9GOY,
Secretary

P.O. Box 204 • Manitowoc, WI
54221-0204



2-Meter Repeater: 146.01 Input/146.61 Output

MANCORAD MINUTES October 13, 1999

The October meeting was called to order at 7:35 p.m. by President, Fred, W6BSF. Since we had a new member in attendance we had introductions.

The minutes were approved with a motion by Len, N9QFO, and a second by Bob, KB9INK.

The treasurer's report given by Roger, W9NPX, was approved by Ken, K9HAG, with a second by Red, N9GHE.

A new member, Ron Shimek, WB9MFB, was welcomed into the club.

A report was given on the Kewaunee Nuclear Plant Drill. Things went very well but there were a few things to improve on for next year. The volunteers that helped were Fred, W6BSF, Roger, W9NPX, Denise, N4WGK, Len, N9QFO, Bill, WD9ERN, and Red, N9GHE.

Fred, W6BSF, handed out certificates to all club members who helped at the Sub event in August. It is a very nice certificate with a stamp for having the most contacts of all the subs. The next sub event aboard the U. S. S. Cobia is scheduled for April 29 and 30, 2000.

Club dues are due right now. It is still \$20.00 for a single and \$30.00 for family. See Roger, W9NPX, to pay.

Elections are going to be held next month. Fred, W6BSF, appointed a nominating committee of Roger, W9NPX, Red, N9GHE, and Vic, WB9VYO. All offices are open, including directors.

Breakfast with the Sheboygan group will start again the second Saturday of the month at Cleveland Family Restaurant. They meet about 8:00.

The auction of Chuck's, W9BZU, donated items went very well. Everything was

auctioned off with the proceeds going to the club. Thank you to Steve, N9PBL, Ron, WS9X, Janice, N9IQZ, Carl, KA9ZTF, and Fred, W6BSF for organizing and handling the auction.

Everyone who attended the annual club family picnic had a good time. It was a beautiful fall day in the park to look for the hidden transmitter. Jim, KB9GOX, won first place gift certificate. Fred, W6BSF, took second place, and Gene, KB9KXF took third place. The horseshoes were flying and fun was had by all. Thank you Fred and Pat for all the work putting it together. The date for next year's picnic is tentative for the first Saturday in October.

Fred, W6BSF, would like to see an upgrade class held. If you are interested contact Fred.

Vic, WB9VYO, has a CW antenna he would like to get rid of. If anyone is interested, Fred has it.

Red, N9GHE, brought a video to show the club on the two buildings that the club would possibly be interested in for a club shack. The club will have to vote in the future on which one would suit our needs.

The monthly membership drawing was held and Ron, WB9MFB, our new member, had his name drawn at his first meeting. The drawing was for \$10.00, so next drawing is \$5.00.

The meeting was adjourned at 8:45 p.m. with a motion by Steve, N9PBL, and a second by Lyle, WB9VTM.

Submitted for approval:
Mary Langer, KB9GOY
Secretary

MEETING ATTENDANCE

W9NPX - Roger

WB9OBX - Ken

Quarter Century Wireless Association Southeastern Wisconsin Chapter 162

Larry McCalvy, WA9JMO
5400 Six Mile Road
Racine, WI 53402



Our Annual Meeting and Election, held last month at Bentley's American Grille Restaurant, witnessed a strange phenomenon, at least for this group. After the nominating committee presented their slate of six candidates for the three open Director positions, the committee recognized two additional nominations from the floor, Larry McCalvy, WA9JMO, and Bill Hawes, W9ERG. The ballots were distributed, cast and counted. Neither floor nominee garnered enough votes to place either in the top three. Ken Knoff, N9NBC, a top vote getter, then withdrew from the election giving Larry, the third Director position. The Directors convened in a side room to elect their officers for Y2K. Larry McCalvy, WA9JMO, was elected President; Ron Fox, K9AGH; Vice-President; and Bob Jensen, W0WLN, Secretary/Treasurer. And Ken Knoff, N9NBC, sat back gesturing as if he were pulling a train whistle. I wonder what conversations took place during the previous week? Ken has graciously offered to continue as Net Control Operator for our weekly Thursday, 9 p.m. net on the Lakeshore Repeater, 147.270 MHz. One good turn deserves another!

I would like to thank Spencer Clope, W9LDH, for two outstanding years as Chapter President. I only hope I can do half as well as Spence did. I would also like to thank Ken Knoff and Al Marini, W9CKQ, for their time, effort and service as they leave their Director positions.

Our seventh Director, Bill Komistra, W9OVZ, was unable to attend the meeting. Bill is still "under the weather" and the doctors have not as yet discovered the cause of this debilitating condition. We are all pulling for a quick remedy. Bill, you are missed at our events and on the air.

Our next meeting is Monday, November 15th at the Wustum Museum of Fine Arts, 2519 Northwestern Avenue, in Racine. The meeting at 7:30 p.m. is preceded by an escorted museum tour, beginning about 6:30 p.m. The museum's new exhibit will have only been open a week prior to our meeting. The tours are informative and interesting. Please try to join us. Meeting agenda items will cover committee appointments, discussion of possible community communication activities, Christmas party, and an in-depth confabulation as to the feasibility of our Chapter offering to host the 2001 International QCWA Convention on a cruise ship in late October of 2001. The cruise duration, if the Chapter agrees to this endeavor and the International Board concurs, would be three, four or seven days. We should have a lively gathering, please mark your calendars and plan to join us; we need all of your ideas and comments.

In closing, I would like to leave you with a little food for thought. For several years, the Racine Megacycle Club had sponsored and supported a Racine area

Please turn to page 8

W6BSF - Fred
KB9GOY - Mary
NZ9Z - John
WB9VTM - Lyle
N9VIA - Oran

K9WIX - Clancy
N9PBL - Steve
N9PZX - Julie
KB9GRC - Tom
AA9MT - Glenn

N9XEZ - Bill
WB9VYO - Vic
WB9MFB - Ron
N9GHE - Red
N9UGI - Dave

AA9WI - Paul
N9QFO - Len
N4WGK - Denise
KB9INK - Bob
K9HAG - Ken

QCWA/Southeastern Wisconsin Chapter 162

Continued from page 7

Hamfest. Due to a lack of sufficient help to set-up and run the event (and I believe this to be the main reason), the club for 1999, eliminated the swapfest in favor of an auction that was held on October 1st.

My purpose in bring up this subject is to suggest a possible melding of talents from Racine Megacycle Club, Lakeshore Repeater

Association, QCWA Chapter 162, and the Kenosha Explorer Post to staff, to plan and host a multi-grouped event, be it a swapfest, auction or both. If agreeable, I would further suggest the appointing of two individuals from each organization to form a feasibility study to see if a project of this nature could indeed happen.

Your suggestions, comments and advice is always sought and appreciated. I can be contacted by phone at (262) 639-7327; FAX at (262) 639-3320; and/or email at: <wa9jmo@wi.net>.

73, Larry McCaivy, WA9JMO



Chapter 162's Y2K Officers and Directors (standing left to right) Bob Jensen, W0WLN, Secretary/Treasurer; Larry McCaivy, WA9JMO, President; Ron Fox, K9AKH, Vice-President; Ed Konicek, W9NVK; (seated), Spencer Clope, W9LDH; and Fern Fisher, W9LCJ.

Photos courtesy Larry McCaivy, WA9JMO



During Chapter 162's Annual Meeting and Election, QCWA certificates of longevity were presented to (left to right) Spencer Clope, W9LDH, for 65-years as an Amateur Radio Operator; Bob Jensen, W0WLN, 50-years as a Ham, 50 continuous years Licensed and a Century Award (age plus years as a QCWA member); Al Algiers, W9HR, the Century Award; and Chuck Knotek, W9GKM, 50-years as a Ham and 50 continuous years licensed.



Larry McCaivy, WA9JMO, Chapter President, presenting QCWA certificates of 50 continuous years as a licensed Amateur Radio Operator; 50-years since first being licensed; and a Century Award - a person's age and the number of years as a QCWA members add up to 100, to Bob Jensen, W0WLN, the Chapter's Secretary and Treasurer. Another photo is on page 4.

RED CEDAR REPEATER ASSOCIATION, INC.

STEVE HART, KA9OMC, SECRETARY

E616 810TH AVENUE

KNAPP, WI 54749

2-Meter Repeater: 146.01 Input/146.61 Output

Greetings, RCRA sponsors and guests.

The following were in attendance at the September Social Hour:

KB9TLV	John McDonald
N9PPE	Jeff Cole
N9VOY	Bob Rose
WB9PMF	Tim Rose
KA9PVY	Ken Reetz
KF9CU	Arlene Kraft
KA9OMC	Steve Hart

KF9CU, Arlene, and WB9PMF, Tim, were pumpkin door prize winners. Arlene presented the group with \$9 collected from UPC labels. Thanks to KA9PVY (Ken), W9AVM (Jim), KF9CU (Arlene), and KA9OMC for saving ShurFine and Price Saver bar code labels.

KB9TLV, John, gave a little report on his work on the WA9CCB SK equipment. John was able to get the antennas, tower, and windmill down, and indicated that there is a tri-band HF beam still for sale. Call Gloria at (715) 672-8151. John also submitted his name in response to our request for additional repeater directors. Thanks, John.

KA9PVY, Ken Reetz, had attended a Lutheran Fellowship gathering in Oklahoma over the summer.

N9VOY, Bob Rose at Chippewa Falls, continues to deliver auto parts as needed around the area. Bob's area is a little smaller recently. When asked "What was the most common part delivered," Bob replied, "They always need alternators and starters."

WB9PMF, Tim Rose, presented the group with a new wired and test Hamtronics model R-301 receiver for the Colfax site, along with tuning tools and FETs to replace other equipment. This is a big boost for our

club, and Tim expended his own resources to do this. Our continued appreciation for his recent donation, as well as his long-standing record of dedication to RCRA.

Our next Social Hour is our last for 1999. The group will get together November 23 at the Peppermill Restaurant at 1414 9th Street, Menomonie. Meeting time is 7:30 p.m. We need to again start talking about the February Auction in Eau Claire, and search out volunteers to assist with this as well as remind everyone of the year-end pledge drive for renewal support for the repeater. Bring a friend.

N9ZFY, Everett Biles at Durand, continues to help people who need transportation to the VA Hospital and other facilities. Everett also baled hay for his brother Tom with a John Deere Model 60 and a 24-T baler this summer. At least that tractor has power steering.

KB9SGY, David Garnett, reports passing his Technician Plus at the recent Eau Claire exams. Dave has been practicing code for a couple years, and also was a part of the Mission Eau Claire classes in ham radio. We are all celebrating with David on this one.

KB9LUK, James Kinney at Eau Galle, is looking for an Azden PCS 2000 microphone. Contact James at (715) 283-4373.

The directors of RCRA have voted and accepted N9RSU, Leroy Dick, Sr., of Eau Claire, and KB9TLV, John McDoband at Cumberland, to be added to the directorship of RCRA. Their names will be added to the non-stock corporation filing in September, 2000, but will be effective to our operation immediately. Thanks, John and Leroy.

Steve Hart, KA9OMC

Wisconsin Nets Association Ltd.

Art Evans, KA9KLZ, Secretary

213 N. Jefferson • Cuba City WI 53807-1558

WISCONSIN NETS

Net	WNA	Freq.	UTC	CDT	Manager
BWN	Yes	3985	1100	0600	W9RCW
BEN	Yes	3985	1700	1200	KE9VU
WSBN	Yes	3985	2230	1730	WB9WHQ
WNN	Yes	3723	2300	1800	KB9OCZ
WSSN	Yes	3645	2330	1830	N9BDL
WIN/E	Yes	3662	0000	1900	WB9ICH
WIN/L	Yes	3662	0300	2200	W9UW
RCRA	No	01/61 (Mondays CDT)	0030 (Menomonie Area)	1930	KA9OMC
Gr. Bay	No	72/12	0245 (Green Bay Area)	2145	WB9NRK
ARES	No	4.65/5.25 (South East/South Central Wisconsin)	0200	2100	
RACES	No	3993.5	1400 (LSB Sunday)	0900	WA9OAY

Wisconsin Section STM Report - September 1999

Who are we? We are the traffic handlers. We are the operators who fight the static crashes and the sun spot cycles. We are those who care about sharpening the skills that make us good operators. We are willing to practice, to spend our time in taking and delivering a message, in acting as net control, in serving as a link from one net to another - even though we might have other activities pressing. We are the workers, the retired, the students, the young, the old, the happy and the struggling. We are the stations that ask first before using a frequency. We are the operators who will willingly give a repeat five or more times if the receiving station is working hard at getting it. We follow net discipline. We listen. We are the folks who know that every time we handle a message, participate

in a net, keep the system working, we are contributing to the reason ham radio exists today. Are we special? Heck, no. We're just providing a service while enjoying our hobby. Anyone can do it, and I hope a lot more anyone join us soon.

73.

K9LGU/STM

NET	QNI	QTC	QTR	SSN	NM
BWN	1246	1674	2250	30	W9RCW
BEN	480	49	780	30	KE9VU
WSBN	473	92	806	30	WB9WHQ
WNN	No report				KB9OCZ
WSSN	187	36	303	30	N9BDL
WIN/E	214	52	292	30	WB9ICH
WIN/L	171	42	295	30	W9UW

Continued on page 9

Wisconsin Nets Association Ltd.

Continued from page 8

Station Activity Reports

STATION ORIG RCVD SENT DLVD TOTAL

K9JPS	1	443	59	271	772	BPL
W9RCW	0	402	32	260	694	BPL
K9RTB	0	389	94	205	688	BPL
W9IHW	2	377	45	228	652	BPL
W9YPY	0	256	257	0	513	BPL
K9GU	0	150	24	101	275	
W9CBE	0	73	82	3	158	
AG9G	0	51	58	29	148	
KE9VU	0	42	48	0	90	
N9BDL	0	26	61	1	88	
KA9FVX	0	4	48	3	55	
N9CK	7	23	23	0	53	
KA9KLZ	0	1	50	0	51	
W9UW	0	34	15	1	50	
W9YCV	0	25	19	4	48	
K9LGU	0	40	5	1	46	

K9FHI	0	5	37	1	43
W9BHL	0	0	30	0	30
K9HDF	0	0	29	0	29
AA9BB	0	0	28	0	28
KG9B	0	1	25	0	26
W9ODV	0	0	25	0	25
WB9ICH	0	17	4	0	21
N9JIY	0	1	16	1	18
K9UTQ	0	0	4	0	4
W9PVD	0	1	2	0	3

Public Service Honor Roll

Call	Categories								Total
	1	2	3	4	5	6	7	8	
K9RTB	60	24	24	205	0	20	0	30	363
W9RCW	0	30	0	0	260	30	0	0	320
K9FHI	60	24	24	1	0	30	0	30	169
AG9G	60	24	24	29	10	0	0	0	147
N9BDL	60	24	24	1	0	30	0	0	139
W9YCV	60	24	24	4	0	20	0	0	132
W9CBE	60	24	24	3	0	20	0	0	131
KA9KLZ	60	9	0	0	0	30	0	30	129
K9LGU	60	12	24	0	0	20	0	0	116
KA9FVX	60	18	3	0	10	0	0	0	91

Hurricane Watch Net gets surprise check-in

The Hurricane Watch Net got a surprise check-in October 20 as it activated on 14.325 MHz to track the course of Hurricane Jose.

"Riley Hollingsworth checked in to tell us that they were monitoring and would handle any interference problems," said Hurricane Watch Net Manager Jerry Herman, N3BDW. "Needless to say, the little bit of interference we were getting almost immediately ceased. His call sign and his presence on frequency had a positive effect."

Hollingsworth -- who's K4ZDH -- was equally impressed. "Those guys did a wonderful job," he said. "I was very impressed and very proud!"

While Jose was still a hurricane, the Hurricane Watch Net had been taking reports from stations in the track of the storm, and transmitting advisories. Hurricane Watch Net participants file real-time storm and weather data, which is relayed to forecasters via W4EHW at the National Hurricane Center in Miami. Herman said things got up close and personal for one of the W4EHW operators during Hurricane Irene earlier this month. "Julio Ripoll, WD4JNS, reported that flooding in the Miami area was

the worst he had seen in 17 years," he said. "Julio had to drive through water two feet deep to get to and from the National Hurricane Center in order to operate W4EHW." At one point, Herman said, Ripoll -- the assistant W4EHW coordinator -- waded through knee-deep water to assist a stranded motorist.

Herman says the Hurricane Watch Net has had a very good season so far. "Probably the majority of our reports are measured data, and that's something the guys at the Hurricane Center really appreciate," he said. Herman speculated that more hams now own home weather stations that allow them to provide precise weather data at their location to the Net.

Overall Net participation this hurricane season has been excellent too, Herman said. "I'm real pleased with the way it's been going, and the people in Miami seem to be using the data -- they keep asking us for more -- and we'll keep trying to get more for them."

The current hurricane season runs through November.

The ARRL Letter

ISS flights reset

NASA now says the space shuttle Atlantis flight -- mission STS-101 -- that will carry the initial Amateur Radio gear into space for the International Space Station will launch no earlier than February 10, 2000.

The flight transporting the VHF and UHF hand-held transceivers and associated antennas and accessories to the ISS had been scheduled to launch in December. NASA imposed a shuttle launch hiatus to perform electrical inspections of the entire shuttle fleet, however, disrupting the launch schedule. The inspections came in the wake of problems during the July launch of the shuttle Columbia, when astronauts and ground controllers struggled with power failures in computers controlling two of the orbiter's three main engines.

"Our number one priority for the space shuttle is to fly safely, and that is why we delayed our launch preparations and have

performed comprehensive wiring inspections and repairs," Space Shuttle Program Manager Ron Dittmore said.

NASA and Russian space agency officials also have agreed to delay the launch of the Zvezda service module that will house the amateur gear. According to NASA, a US delegation and the Russians agreed that "it is no longer prudent to proceed with the current service module schedule." The new projected launch window is between December 26 and January 16.

In August, key antenna hardware for the Amateur Radio on the International Space Station project headed for NASA's Goddard Space Flight Center to undergo integration and flight qualification testing. The initial ham gear will support amateur operation from the ISS on voice and AFSK packet on 2 meters and 70 cm.

For more information on ARISS, visit: <http://garc.gsfc.nasa.gov/~ariss/ariss.html>

The ARRL Letter

AD9X: Support the Amateur Radio Protection Act!

By Jim Lackore, AD9X
Wisconsin ARRL Section Government Liaison

All Wisconsin radio amateur operators are urged to contact their Wisconsin senators and congressional representatives to urge support for and passage of House of Representatives bill 783 - the Amateur Spectrum Protection Act.

This legislation would protect our frequency allocations by requiring the FCC to provide equivalent replacement spectrum should it ever need to reallocate amateur radio spectrum allocations.

The bill was introduced during this session of the Congress by Representative Michael Billrakis, a Republican from Florida.

Currently, HR 783 has nearly 100 cosponsors - none of whom are from the Wisconsin delegation - but it is still in the Telecommunications Subcommittee of the Commerce Committee.

It is especially important that you urge your representative to sign on to the bill as a cosponsor. Also, please contact Senators Kohl and Feingold and urge them to sponsor or cosponsor a companion bill in the United States Senate.

It is also important to express your support for HR 783 to Representative Thomas Barret from Wisconsin's 5th Congressional District. He is a key member of the House Commerce committee which must consider this bill and hopefully report it out to the full House

for recommendation for passage.

E-mail and snail mail addresses for Wisconsin's senators and representatives can be obtained from me (Jim, AD9X) or from a number of on-line sources.

E-mail addresses:

ARRL:

<<http://www.arrl.org/govrelations>>

America on-Line:

<<http://government.aol.com/mygov>>

The state of Wisconsin:

<<http://www.legis.state.wi.us>>

and

<<http://www.state.wi.us>>

United States Government:

<<http://www.house.gov>>

<<http://www.senate.gov>>

You can also call the legislative hotline and leave a message for your representative, toll-free at (800) 362-9472.

Sample snail mail and e-mail letters and messages can be downloaded from the ARRL Web site or acquired from me on the air or by e-mail: <jlackore@aol.com>.

ARRL Humanitarian award nominations close December 31

Nominations close December 31, 1999, for the 1999 ARRL International Humanitarian Award. The award is dedicated to those amateurs who, through Amateur Radio, are devoted to promoting the welfare of mankind. The prize goes each year to truly outstanding Amateur Radio operators in areas of international humanitarianism and the furtherance of peace.



The award recipient is selected by a committee appointed by the League's President. The committee will accept nominations from a licensed radio amateur, governmental or any other organization that has received the benefits of the radio amateur's extraordinary service. Nominations must include a summary of the nominee's actions that qualify the recipient for the award and statements from at least two references-including names and addresses-for verification.

Any radio amateur or group of amateurs worldwide who has provided extraordinary service through their Amateur Radio skills for the benefit of others in times of crisis or disaster is qualified to receive the award.

The ARRL International Humanitarian Award recognizes the hobby's international communication role and that hams regularly help people in need throughout the world. Amateur Radio is one of the few media where average people throughout the world can meet to talk to each other and spread goodwill across otherwise impenetrable political boundaries. The Award is intended to promote positive efforts toward international understanding and peaceful communication.

All nominations and supporting materials for the 1999 award must be submitted in writing in English to ARRL International Humanitarian Award, 225 Main St, Newington, CT 06111 USA. Nominations must be received by December 31, 1999. In the event that no nominations are received, the committee itself may determine possible recipients or decide to make no award.

The 1998 award went to the Radio Amateur du Quebec Inc, for its efforts during a devastating ice storm. For details, see June 1998 QST, page 58.

--Rick Palm, K1CE, in
The ARRL Letter

Happy Thanksgiving

from

Badger State Smoke Signals

Antenna Service Plus

Serving all of Southern Wisconsin!

(608)938-4999 Office

(608)325-3842 Fax

Experienced & Insured

New and used

Systems available!

For professional Service and Installs of CATV, Satellite, TV-VHF/UHF, Telephone, Home Theater, Amateur and Business 2 Way Systems



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association
 Allen Schnepf, NØGMJ, Treasurer
 Ogema, WI 54459

Andy Nemec, KB9ALN, Editor • 453 Cottage Grove Avenue • Green Bay, WI 54304 • e-mail: kb9aln@juno.com

WAPR News - November, 1999

Hello again, and welcome to November. I do hope you are adjusting to the shift in temperatures, as this is - and I hate to say it - only the beginning.

As you may remember from last month, there has been a concerted effort to put a node stack in operation in Waupaca county, and so far, the efforts seem to be paying off.

As you might also recall, I mentioned that there were some developments concerning Waupaca County ARES that could present an opportunity to obtain a good site for this node stack. Apparently, there has been an arrangement made that would allow the node stack on a tower site that ARES has access to. And it appears to be good site, test have shown that this site will not only provide good LAN coverage, but will also prove to be a vital East-West backbone link. Of course this is good news for Waupaca County hams - they have been isolated and without much in the way of packet facilities for a long time. Bob, N9BKJ used to operate a stack in Waupaca, but gave it up for other pursuits several years ago.

This also is a very good development for those that like to node-hop, not to mention the packet mail forwarding system. Currently, there is no easy or reliable way to forward mail from the Fox River Valley and points to the West. Recently, Bob KA9JAC in Neenah and Joel, N9BQM in Pittsville have resorted to temporary telephone forwarding sessions. Of course we like to do it via RF, so the Waupaca stack will certainly be great to see. Not to mention a lot cheaper than using the telephone!

One reason why the Fox Valley has been so isolated is the loss of the Green Lake Node stack, or at least parts of it. As of this writing, the whole situation is not totally clear, but the Green Lake Node Stack is unreachable by me. Word that I have gotten is that the Green Lake LAN node did not see enough use to keep it on the air. Whatever the exact circumstances are, we may not see that stack on the air in the near future. If there are any developments on this in the future, I will report them here.

On another topic, you have read my requests for input regarding this column and the accompanying articles on this page. I was certainly glad to hear from Jim, WA9ARB up in Door County, who was kind enough to send me a note via E-Mail. I do appreciate hearing from readers, and Jim's note was a welcome one.

He comments that he enjoys seeing articles concerning Linux, as he has installed it on his computer and has been learning the ins and outs of the system since. I am glad that he is having fun with it, and look forward to hearing about his future projects and progress.

Jim also reports that they were hoping to have the new Door County backbone node in place by now, but scheduling amongst the people doing the actual installation has been a problem. As of this writing, the node is not on the air just yet. With luck and a bit of good weather, it may be on the air soon.

One more note before closing - the third part of the series on using Linux in ham radio (specifically packet) does not appear here as originally scheduled. Time constraints this month have prevented me from carrying out all of the various experimentation needed to write parts of the article. So instead of that article, the one scheduled to be printed for the December issue is printed this month. The third part of the Linux series will appear in December. I apologize to those who were looking forward to it (Jim was one, apparently), and thank you for your patience.

And that is all for this month. Until next time, 73 from Andy

A New TNC for Packet Radio

by Andy Nemec, KB9ALN

Since packet radio first became a practical mode that amateurs could easily enjoy, there have been only minimal changes in the basic hardware used for the mode. The very first packet controllers were meant for direct contact, and used the Vancouver Amateur Digital Group Protocol. Then we saw the development of AX.25, and a machine called the TNC-1 was born. As time went on, the protocol was changed a little bit, and the world saw the introduction of the TNC-2. Along with this TNC, we saw Multi-Mode controllers that would not only act as a TNC, but as an interface for popular HF modes like RTTY, ASCII, and

AMTOR.

Later on we saw multi-mode controllers with new features like Digital Signal Processing (DSP), as well as new operating convenience features. While these models became a bit more prevalent, the basic concept remained the same. They were boxes that did not require a computer to use. You could get a simple "dumb" terminal that hooked up to the RS-232 (serial communications) port. The TNC did (and still does) all of the real hard work, so you did not need an expensive computer to use them. Good thing too, because computers were out of reach for a lot of hams in those days.

This meant that the TNC had to not only do the work of making packets, but it also had to be able to accept commands to make it run. And these commands had to be understood by the operator (or kind of understood). They use a rather arcane command set that still confuses many users. This worked well once you mastered this series of commands, and intended to do nothing other than leave mail, hook up to a BBS, or just engage in a keyboard-to-keyboard chat. But soon after the standardization of the TNC 2, people found they wanted to do more with packet radio. And then this thing called the Internet came along, which showed us what we could do if we had the opportunity. Another interesting development that coincided with this is the advent of reasonably priced home personal computers.

Because of these developments, hams became familiar with TCP/IP. This is the same method of communication that the computers on the Internet use. Because they now had cheaper computers to use in their shacks, and because hams were writing programs that allowed them to use TCP/IP, packet operators seized upon the opportunity to use the same kind of services that were available on the Internet. But there were, and still are, challenges to using it.

Until now, hams needed one of a number of special computer programs to run TCP/IP over standard packet radio. The program is tremendously capable, and has a lot of features. However, any complex computer program takes time to set up and understand. Not everyone has the time or inclination for such activity, and it effectively prevented widespread implementation of TCP/IP over packet radio. Which really is a shame as it has some highly desirable features. Add to these complications the fact that in order to use one of these programs, the TNC had to be put into a special mode, the KISS mode, so that the program

could utilize the TNC. Getting a TNC into KISS was, in the beginning, a tortuous process involving more of those arcane and even mysterious commands that we mentioned before. The process has gotten much easier, but still is kind of a hassle.

All of this may be coming to an abrupt end, however. A group of hams in Europe has recently announced the introduction of the "MCB 152". This is a new kind of TNC that allows you to use your standard Internet software with packet radio. Your Internet software sees this device as a telephone modem, so you can plug-and-play your way to using TCP/IP services to keyboard chat, send and receive files, send and receive mail, and even look at Web pages. That's right, you can even hook Netscape up to it.

Of course, in order to make a truly new product, these hams started from scratch. They built a TNC that consists of 3 boards that stack on top of one another. The computer processing board sits on bottom, an interconnect board stacks on top of that, and the modem unit plugs on top of the interconnect board.

This TNC uses the USCC Baycom-type modem, and you have your choice of speeds - 1200 bps AFSK, 4800 bps and 9600 bps G3RUH modems. Connection to a radio is done in the customary manner, and is somewhat dependent upon the speed of the modem. For 1200 bps, the usual speaker output, microphone input, and PTT are used. For 4800 and 9600 bps speeds, direct connection to the detection and modulation systems, as well as the PTT, are used. This is true of standard TNCs as well, because this modem is very identical in function to the one you have in your current TNC. It converts digital data to audio tones, and converts audio tones to digital signals - exactly what the modem in your current TNC does.

The computer processor board contains the CPU chip and almost all of the other digital "guts" work with the modem and computer it is hooked to. While conventional TNC-2 units use the Zilog Z-80 processor (which has been around forever), the MCB 152 uses the Intel 80c152 microcontroller. This is a considerably newer chip, and operates at a faster speed. It has to, after all, it is capable of radio data rates up to and including 9600 bps.

The interconnect board has connections for the modem and computer controller card, as well as connections to the radio and the serial port. Several serial baud rates are available, from 1200 baud to 57.6 Kilobaud. Automatic serial baud rate makes setup that much easier -

WISCONSIN AMATEUR PACKET RADIO MEMBERSHIP APPLICATION

PLEASE PRINT

NAME: _____ CALL: _____ HOME PHONE: (____) _____

ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____

HOME BBS: _____ FREQ: _____ (Listing your home BBS is important)

Your HOME BBS should be a full service BBS, not your TNC's mailbox.

MY PACKET STATION OPERATES: _____ DAY _____ NIGHT _____ 24HRS

I OPERATE A: _____ DIGIPEATER WITH ALIAS OF: _____

_____ FULL SERVICE BBS

PRIMARY PACKET INTEREST/EXPERTISE IS: _____

_____ YES I want to receive Badger State Smoke Signals and I understand that part of my dues goes to pay this subscription, cost \$20.00

_____ NO I do not wish to receive Badger State Smoke Signals as a part of my WAPR membership. Cost \$15.00

COMPLETE and return this form with your check or money order - \$15.00 membership only or \$20.00 membership and Badger State Smoke Signals, made payable to W.A.P.R. to:

Allen Schnepf, NØGMJ, Treasurer
 W5000 SR 86
 PO Box 558
 Ogema, WI 54459

no more "PRESS * TO SET BAUD RATE" messages to deal with.

Another feature that makes setup easier is the use of a short series of commands that replaces the conventional modem initialization string. This means that your Internet client programs see this device as an external modem, just like the one you use for your telephone Internet service. No need to worry about remembering the usual TNC command set and parameters - they are not used in this TNC.

Availability

Currently, this TNC is only available in kit form. However, don't let that fact fool you into thinking that it is some cheap, shoddy thing that someone turned out in their basement. A look at the construction manual (which you can get via the Internet in pdf format for the Adobe Acrobat Reader) reveals it to be a very high-quality unit. The boards are professionally produced, silk-screened, and well-labeled. Step-by-step assembly instructions are relatively easy to follow, although some of the syntax is a little strange. After all, it was written by people who use English as a second language. Don't let this scare you away - the manual is very understandable and should not deter you from building one of these if you get the urge to try one.

Conclusion and Additional Information:

This TNC, being the only significantly new product introduced in the packet community, is sure to make waves. While it is impossible to predict exactly what kind of an impact it will have on the way that current TNCs are built and marketed, it is sure to have some. And it seems to be the most painless way to try working with TCP/IP presented to usever.

It should be noted that the motivation behind this project was not so much to make it a commercial product, but rather a way to promote TCP/IP usage in ham radio. While their intent is not to sell it, it sure would be nice if a mass-producer would manufacture it under license.

If you would like to know more about the MCB 152, look for the web pages put together by the "TCP/IP Task Force" at:

gallery.uunet.be/Gert.Leunen
-or-
www.caseconsole.com/mcb152

The first site is devoted to general information, and you may wish to look at that one first.

I hope you find it interesting. Until next month, 73 from Andy.

THE TEST POINT

continued from page 3

SHEBOYGAN, WI

All sessions will be held in the Red Cross building, 2023 Erie Avenue, Sheboygan, WI, in the SCARC meeting room on the lower level of the building. This area is not readily handicapped accessible. In the event there is a candidate who would be affected by this situation, we will accommodate that person in one of the Red Cross conference rooms on the main level of the building which IS handicapped accessible. Pre-registration is necessary (we don't want get caught sort!) Contact: Art Pahr, K9XJ, N8209 Willow Road, Plymouth, WI 53073-2929. (920) 876-2370. e-mail <k9xj@excel.net>

ONALASKA, WI (ARRL/VEC)

The Riverland Amateur Radio Club will hold test sessions at the Onalaska Public Library, 741 Oak Avenue South. registration begins at 9:00 a.m. Please bring two forms of identification and two copies of all original documents, CSCEs, license, etc. For more information contact: Roger Reader, KA9BKK, 526 13th Ave. N., Onalaska, WI 54650. (608) 783-0723.

MEDFORD, WI (ARRL/VEC)

Taylor County Area AREC. Registration starts 8:30 a.m., testing starts 9:00 a.m. Location: The conference room in the lower level of the Sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Take Ogden St. west off of Hwy. 13 to the courthouse. Park in the lots on the east or south sides of the courthouse or on the street. PLEASE use the entrance on the south side of the courthouse and watch of the signs. Walk-ins welcome. Contact: Tom Hrdina, N9GEN, 2373 Willow Ave., Medford, WI 54451. (715) 748-4054.

PEWAUKEE, WI (ARRL/VEC)

First Saturday on months school is in session. Exams held at Waukesha County Technical College Science Building. WCTC is on Highway JJ off Hwy 16 from the East I-94 and Hwy T from West I-94 just north of GE Medical Systems. Handicapped parking is at the rear of the building. Tests start at 9 a.m. and registration ends at 10 a.m. Contact: Al Johnson, AA7CS, (920) 568-0836; Roger



Yellow Thunder Amateur Radio Club

WB9FDZ (Original Club Call)
K9ODK (Robert L. Prine Memorial Call)

Raymond J. Matlosz, N9MLZ, Secretary
450 West 2nd Street • Reedsburg, WI 53959



The October 5, 1999 meeting of the Yellow Thunder Amateur Radio Club, Inc. was called to order at 7:42 p.m. by Steve Schulze, N9UDO, club president.

The minutes of the September meeting and the treasurer's report were accepted.

ANNOUNCEMENTS: 146.88 repeater was down. Steve's simplex 145.310 with a 123.0 tone and negative offset was working.

OLD BUSINESS: Discussed the hamfest past and brainstormed about things that could be done to increase attendance next year. The question of whether or not to purchase Bill Hommel's radio was tabled. The club's cookout at Steve's place last month was a success - good food - good bonfire - good time had by all. There was some talk about making this an annual end of summer event.

ELECTION OF OFFICERS: Nominated and elected were:

PRESIDENT: Steve Schulze, N9UDO
VP: Raymond Matlosz, N9MLZ
Secretary: Leonard Wagner, N9XJG
Treasurer: Bill Klinkner, N9KXX

NEW BUSINESS: Tom Harrison, N9PQJ asked if

Bradley, AA9OJ, (262) 691-3089 or SEWFARS Repeater club c/o Jam Lazachek, KF9GG (262) 650-0724.

HUDSON, WI (ARRL/VEC)

Sponsor: St. Croix Valley AR Testing Col. Time: Call for time and walk-in info, Contact: Gregory Miller (715)386-9857 Location: St. Croix County Emergency, Government Center by jail, Carmichael Rd. lower level, Hudson, WI 54016. (Information tnx ARRL Web site)

FRIENDSHIP, WI (ARRL/VEC)

Sponsor: Adams County ARC. Location: Adams-Columbia electric Cooperative (Community Room), 410 E. Lake St., Friendship, WI 53934. Contact: Karl Simonson, KB9EQI, (608) 565-6533. kb9eqi@iname.com

HAMFEST EXAMS

Cedarburg WI - ORC Hamfest
Eau Claire WI - ECARC Hamfest
Green Bay WI - ARES Hamfest
Hayward WI - Hayward Hamfest
Kaukauna WI - Swapfest
Manitowoc WI - Lakeshore Hamfest
Oak Creek WI - SMARC Hamfest
Racine WI - Racine Hamfest
Rhineland WI - NWARC Swapfest
Rockford IL - RARC Hamfest
Rothschild WI - WVRA Hamfest
South Milwaukee, WI - SMARC Hamfest
Stevens Point, WI - CWRA Swapfest
Waukesha WI - Midwinter Swapfest
Dubuque IA - Hamfest

See the Swapfest column for additional information and contact persons.

IN THE NEIGHBORHOOD

DUBUQUE, IOWA

Dubuque Hamfest. Contact: Carl Clark, N0KAX, 2145 Delicia Drive, Dubuque, IA 52001. (319) 557-9149.

ROCKFORD/LOVES PARK, IL

Third Saturday of every month. Northern Illinois Volunteer Examiners (W5YI VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. 9:00 a.m. to noon. No new applicants after 11:00 a.m. Walk-ins welcome. Contact: Rusty Cordell, WB9QYV, 1823 Hulin St., Rockford, IL 61102-2619. (815) 968-0080. e-mail WB9QYV@aol.com

MINNESOTA TEST INFORMATION

From The Ground Wave, Saint Paul Radio Club

Saint Paul Radio Club (SPRC)

TESTING: First Saturday of the month, 8:30 a.m. Contact: Ed VanCleave, W0VC, (612) 636-0108 Test Site: St. Paul Technical College 235 Marshall Ave. St Paul, MN

there was an inventory of what the club owned and where it was. (short answer: sort of) There was a question about the club purchasing a MFJ antenna analyzer. However, a couple of members said they could make theirs available to the club. The Klinkner's offered to host the Christmas party Saturday, December 11, at their home.

BUCK NIGHT WINNER was Pete Sweeney, WD9JIB who was not present to collect.

NEXT MEETING: Tuesday November 2, 1999 at 7:30 p.m., room 18, Baraboo Civic Center.

Raymond (THANK YOU LEN) Matlosz, N9MLZ
Club Secretary

Following members were present:

Jim Paul	N9LKY	Baraboo
Raymond Matlosz	N9MLZ	Reedsburg
Thomas Harrison	N9PQJ	Reedsburg
Art Kleefisch	W9WSS	Baraboo
Leonard Wagner	N9XJG	Baraboo
Steve Schulze	N9UDO	Baraboo
Bill Klinkner	N9KXX	Sauk City
Anne Klinkner	N9PQL	Sauk City
Patrick Klinkner		Sauk City

Anoka Amateur Radio Club (AARC)

TESTING: Second Saturday of the month, 9 a.m. Contact: Craig Johnson, AA0ZZ (612) 483-3143 Test Site: Blaine City Hall 9150 Central Ave NE Blaine, MN
Bloomington Office of Emergency Management

Bloomington Amateur Radio Club (BARC)

TESTING: Fourth Saturday of the month, 9 a.m. Contact: Dan Royer, KE0OR (612) 888-9756 Test Site: Fire Station No. 1 94th St. & Nicollet Avenue S. Bloomington, MN

Valley Amateur Radio Club (VARC)

TESTING: Second Thursday of the month, 7 p.m. Contact: Bill Martin, AI0D (612) 432-0438 Test Site: Hayes Community Center 14601 Hayes Road Apple Valley, MN

W5YI Group

TESTING: Third Tuesday of the month, 6:30 p.m. Contact: Dave Ranney, N0AXL (612) 542-2553 Test Site: Eden Prairie Library 479 Eden Prairie Drive Eden Prairie, MN

SE Metro Area Radio Club (SEMARC)

TESTING: Third Saturday of the month, 9 a.m. Contact: Dave Harrell, K0BTE (612) 459-8678 Test Site: Cottage Grove fire Station 8641 80th ST., S Cottage Grove, MN.

The times and places listed above are the usual time and place for each VE team. Occasionally, sessions are canceled or changed. It is a good idea to call ahead to confirm the test time and place. This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules. Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to kebnet@palacenet.net.



Darrow's

COUNTRY MARKET

1212 8TH STREET
BARABOO, WISCONSIN

Buy it! • Sell it! • Trade it! • Fix it!

SWAPFESTS



28th ANNUAL MIDWINTER SWAPFEST

WAUKESHA EXPOSITION CENTER
WAUKESHA, WISCONSIN
SATURDAY
JANUARY 8, 2000

1999 WINNERS
Phillip A. Bogacki, KB9KEE
Milwaukee
Christopher D. Molek, KB9GTG
Richland Center

Both sponsored by:
THE WEST ALLIS RADIO AMATEUR CLUB, INC.
P. O. BOX 1072 • MILWAUKEE, WISCONSIN 53201

HAM IT UP EVERY SPRING! MADISON SWAPFEST

April 9, 2000
Mandt Community Center
400 Mandt Parkway • Stoughton, WI
Doors open at 8 a.m.
Sponsored by MARA/W9HSY
P. O. Box 8890 Madison, WI 53708-8890
Swapfest Information Line: (608) 245-8890

SOUTH MILWAUKEE AMATEUR RADIO CLUB SWAPFEST 00

July 8, 2000
(Held every July)
American Legion Park
Shepard Avenue • Oak Creek, WI
(414) 762-3235 Extension: Ask for Verne
P. O. Box 102 South Milwaukee, WI 53172

SEWFARS SWAPFEST

HAM RADIOS • COMPUTERS • ELECTRONICS
AMATEUR LICENSE EXAMS
SUNDAY, MARCH 12, 2000
8:00 A.M. - 2:00 P.M.
Setup Starts at 6:00 A.M.
For more information, call (414) 835-7035

LAKESHORE HAMFEST AND COMPUTER SWAPFEST

Manitowoc County Expo
Intersection of Hwys 42-151 and I-43 on Cty Highway R
Saturday, May 13, 2000
For more information, call:
Red, N9GHE • (920) 84-3733
Dick, N9QFY • (920) 682-9264
ManCoRad Radio Club • P.O. Box 204 • Manitowoc, WI 54221-0204

TRI-COUNTY ARC PRESENTS HAMFEST Y2K

YOUR SPRING FAVORITE!
Sunday, March 19
Jefferson County Fairgrounds
tricountyarc@globaldialog.com
TCARC 413 S. Main Street 920-563-8740
Fort Atkinson, WI 53538 Evenings

This space is available.

email: smokesigs@baraboo.com
Write: Jim Romelfanger, 412½ Ash Street
Baraboo WI 53913-2501

Eau Claire Amateur Radio Club W9EAU HAMFEST Saturday, June 10, 2000

For Information Contact:
Jim Staatz KG9MV at 715-838-9108
P.O. Box 1867 Eau Claire, WI 54702-1867
kg9mv@ecol.net http://www.ecarc.org

Racine Amateur Radio and Computer Auction

Friday, October 1, 1999 • 7 p.m. to ??
Inspection starts at 5 p.m.
Knights of Columbus Hall (just east of I-94)
13249 Washington Ave. (Hwy. 20) • Racine, WI
\$2.00 admission • \$1 registration per lot • Low auction fee
E-mail: w9udu@wi.net Voice mail: (414) 552-6RMC
Web: http://www2.wi.net/~hamradio/auction/HTML

Ozaukee Radio Club 22ND ANNUAL RADIO AND COMPUTER SWAPFEST Saturday, May 6, 2000

8 a.m. to 1 p.m. • Circle B Recreation Center
Intersection of Highway 60 and County I
Exams by Badger Examiners, c/o Gary Sharbuno,
5119 W. Willow Rd., Brown Deer, WI 53222
Swapfest sponsored by the Ozaukee Radio Club
1702 Holly Lane, Grafton, WI 53024

Circus City Swapfest

Sponsored by The Yellow Thunder Amateur Radio Club
Saturday August 12, 2000 • 7 am - Noon
Sauk County Fairgrounds • Baraboo, WI
Vendors • Concessions
Camping • Free Parking
Tail Gate Area
\$4 - Advanced
\$5 - At Gate
8 Foot Tables - \$5
Steve Schulze, N9UDO (608) 356-2313/356-4777
http://members.baraboo.com/ssschulze/hamfest.htm
Bill Klinkner, N9KXX (608) 643-6908/643-6453

Red Cedar Repeater Association, Inc.

AUCTION

February 22, 2000 • 7:00 p.m.
American Legion Post 53 • 634 Water Street
Eau Claire, WI
CONTACT: 715-665-2374
Steve Hart, KA9OMC E616 810th Ave. Knapp, WI 54749

PRODUCTS AND SERVICES

AMATEUR ELECTRONIC SUPPLY

5710 W. Good Hope Road
Milwaukee, WI 53223
Toll Free 1-800-558-0411
414-358-0333

The World's largest Ham Dealer
is located in Wisconsin
and throughout the world at
www.aesham.com

- Complete Inventories
- Quality Used Gear
- Top Trades
- Service Department
- Competitive Pricing
- Same Day Shipping

**Browse our inventory
without leaving your chair**

Download the Newest AES Catalog
Place an Order on-line at our
SECURE SITE



Radio Recyclers

USED HAM RADIO EQUIPMENT
Neil Lawton WK9Q
www.execpc.com/~radiorec radiorec@execpc.com
414-760-3000
Radio Estate Liquidators
over 40,000 tubes and other antique radio parts
5702 W. Good Hope Rd. Milwaukee, WI 53223
(Located next door to AES)
Buy • Sell

(715) 644-2112 FAX: (715) 644-2621
RICH'S GENERAL STORE AND SURPLUS
Route 2 • Stanley WI 54768

"YOUR DISCOUNT HAM SOURCE"

Alinco mobile HF, VHF/UHF, and HTs

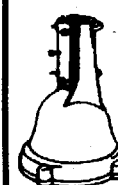
Ask if any Alinco factory closeouts are currently available!

AMATEUR RADIO BOOKS, CASSETTES, AND VIDEO TAPES • GARMIN GPS

Jo, N9MEI (800) 646-RICH Rich, N9MEH

Craig Henderson
N8DJB

Phone (419) 352-4465
Hours: 10 - 5



Rotor Doctor

Rotor Parts and Repair



7368 S.R. 105

Pemberville, OH 43450

BATTERIES

BATTERIES FOR ALL YOUR POWER REQUIREMENTS

NICKEL CADMIUM
SEALED LEAD ACID
GEL CELLS
ALKALINE
LITHIUM



E. H. YOST & COMPANY
2211-D PARVIEW RD.
MIDDLETON, WI 53562
TELEPHONE (608) 831-3443
FAX (608) 831-1082
ehyost@mrnick-ehyostco.com

TOWER ELECTRONICS

THE HAMS DIME STORE & WHOLESALE TO THE WORLD



ORDERS 1-800-662-3422
TECH INFO 920-435-3359
FAX LINE 920-435-2980



SCOTT KB9AMM & JILL KB9PZF E-MAIL KB9AMM@JUNO.COM
P.O. BOX 12631 GREEN BAY, WI 54307-2631
PRODUCTS FOR HAMS FROM HAMS SINCE 1978



ARRL Publications HOTLINE

Call toll free! 888-277-5289
e-mail: pubsales@arrl.org

Check us out on the Web:

<http://www.arrl.org/>

- Complete Publications Catalog
- Membership application and services

VCR SERVICE

North Freedom Electronics

Same day service by appointment

VCR Cleaning: \$19.95

Computers • Musical Instruments

Stereos • Auto Sound • CDs • CBs

Sorry, no TVs or stacked stereo systems

HOURS MAY VARY - CALL AHEAD

John Schmelzer
201 E. Walnut, Box 18

(608) 522-4366
North Freedom WI 53951